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(54) Title: CRYSTAL OF EGFR EXTRACELLULAR DOMAIN AND CETUXIMAB FAB FRAGMENT AND USES THEREOF

(57) Abstract: The present invention relates to co-crystals of cetuximab Fab in a complex with extracellular domain of EGFR, and structure coordinates obtained from such crystal. Such coordinates are useful for identifying mimetics that bind to the extracellular domain of EGFR. Such mimetics may for example inhibit binding of ligand to EGFR, inhibit activation of EGFR, and/or reduce proliferation of tumor cells.



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## **CRYSTAL OF EGFR EXTRACELLULAR DOMAIN AND CETUXIMAB FAB FRAGMENT AND USES THEREOF**

### **Field of the Invention**

[0001] The present invention relates to co-crystals of cetuximab Fab in a complex with extracellular domain of EGFR, and structure coordinates obtained from such crystal. Such coordinates are useful for identifying mimetics, preferably EGFR antagonists, that bind to the extracellular domain of EGFR. Such mimetics may for example inhibit binding of ligand to EGFR, inhibit activation of EGFR, and/or reduce proliferation of tumor cells.

### **Background of the Invention**

[0002] Although normal cells proliferate by the highly controlled activation of growth factor receptor tyrosine kinases ("RTKs") by their respective ligands, cancer cells also proliferate by the activation of growth factor receptors, but lose the careful control of normal proliferation. The loss of control may be caused by numerous factors, such as the overexpression of growth factors and/or receptors, and autonomous activation of biochemical pathways regulated by growth factors. Some examples of RTKs involved in tumorigenesis are the receptors for epidermal growth factor receptor (EGFR) (also known as human EGF receptor-1 (HER1)), platelet-derived growth factor (PDGFR), insulin-like growth factor (IGFR), nerve growth factor (NGFR), and fibroblast growth factor (FGF). Binding of growth factors to these cell surface receptors induces receptor activation, which initiates and modifies signal transduction pathways and leads to cell proliferation and differentiation.

[0003] Generally, RTKs have an extracellular region, a transmembrane hydrophobic region, and an intracellular region bearing a kinase domain. The first step in the activation of an RTK is ligand-induced dimerization leading to exposure of phosphorylation sites, activation of the intracellular kinase domain and recruitment of down-stream signaling molecules. The most commonly observed mode of RTK dimerization involves the "crosslinking" of two receptors having exposed dimerization interfaces by binding of a bivalent ligand. For EGFR, structural data published in recent years have led to the proposal of quite a different mechanism. In the absence of ligand, a distinct configuration of the receptor monomer occludes the dimerization interface of the receptor by burying it in an intramolecular "tether." Ligand binding induces a

conformational change in EGFR that exposes this dimerization site, promoting dimerization and receptor activation.

[0004] EGFR is a 170 kD membrane-spanning glycoprotein with an extracellular ligand binding domain, a transmembrane region and a cytoplasmic protein tyrosine kinase domain. Examples of ligands that stimulate EGFR include epidermal growth factor (EGF), transforming growth factor- $\alpha$  (TGF- $\alpha$ ), heparin-binding growth factor (HBGF),  $\beta$ -cellulin, and Cripto-1. Binding of specific ligands results in EGFR autophosphorylation, activation of the receptor's cytoplasmic tyrosine kinase domain and initiation of multiple signal transduction pathways that regulate tumor growth and survival.

[0005] Growth factors that activate EGFR are also thought to play a role in tumor angiogenesis. Angiogenesis, which refers to the formation of capillaries from pre-existing vessels in the embryo and adult organism, is known to be a key element in tumor growth, survival and metastasis. It has been reported that EGFR mediated stimulation of tumor cells leads to increased expression of the angiogenic factors vascular endothelial growth factor (VEGF), interleukin-8 (IL-8), and basic fibroblast growth factor (bFGF), which can lead to activation of tumor-associated vascular endothelial cells. Stimulation of tumor associated vascular endothelial cells may also occur through activation of their own EGF receptors, by tumor produced growth factors such as TGF- $\alpha$  and EGF.

[0006] It has been reported that many human tumors express or overexpress EGFR. Expression of EGFR is correlated with poor prognosis, decreased survival, and/or increased metastasis. EGFR, because of this involvement in tumorigenesis, has been specifically targeted for anticancer therapies. These therapies have predominantly included either a monoclonal antibody that blocks binding of ligand to the extracellular domain of the receptor or a synthetic tyrosine kinase inhibitor that acts directly on the intracellular region to prevent signal transduction.

[0007] Cetuximab MA b (ERBITUX<sup>®</sup>) is a recombinant, human/mouse chimeric, monoclonal antibody composed of the Fv regions of a murine anti-EGFR antibody with human IgG1 heavy and kappa light chain constant regions and has an approximate molecular weight of 152 kDa. Cetuximab binds specifically to the extracellular domain of the human EGFR, and is an EGFR antagonist, which blocks ligand binding to EGFR, prevents receptor activation, and

inhibits growth of tumor cells that express EGFR. Cetuximab has been approved for use in combination with or without irinotecan in the treatment of patients with epidermal growth factor receptor-expressing, metastatic colorectal cancer who are refractory or can not tolerate irinotecan-based chemotherapy. Cetuximab has been shown to be effective for treatment of psoriasis.

[0008] The crystal structure of an EGF-EGFR extracellular domain complex, wherein the receptor domain exists in dimeric form, has been provided Ogiso, H. et al., 2002, *Cell* 110, 775-787. The structure of an EGF-EGFR extracellular domain complex obtained by crystallization at low, non-physiological pH, wherein the receptor exists in monomeric form has also been provided Ferguson, K.M. et al., 2003, *Mol Cell* 11, 507-517. The structure of a transforming growth factor alpha (TGF- $\alpha$ )-EGFR extracellular domain complex in dimeric form has also been determined (Garrett, T.P. et al., 2002, *Cell* 110, 763-773).

[0009] However, the crystal structure of EGFR with an antagonist, particularly cetuximab Fab, has not been previously determined. The invention disclosed herein provides for the first time crystals and atomic coordinates of a complex of an EGFR extracellular domain and cetuximab Fab. Accordingly, the present invention provides methods for identifying potential mimetics by screening against at least a subset of the coordinates obtained from such a crystal. Mimetics may be assayed for biological activities to obtain EGFR antagonists useful for treatment of EGFR dependent conditions or diseases. EGFR antagonists interact with the receptor to inhibit EGFR tyrosine kinase activity, without limitation, by blocking ligand binding, inhibiting receptor dimerization, ultimately inhibiting receptor substrate phosphorylation, gene activation, and cellular proliferation. Preferably, the antagonists have substantially similar or improved effectiveness as compared to cetuximab. The antagonists are used for treatment of conditions associated with EGFR expression. Such diseases include tumors that express, or overexpress EGFR and which may be stimulated by a ligand of EGFR. Also included are hyperproliferative diseases stimulated by a ligand of EGFR.

### **Summary of the Invention**

[0010] In one aspect, the present invention provides a crystal of a receptor-antibody complex comprising a receptor-antibody complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab, wherein the crystal has a resolution



determined by X-ray crystallography of better than about 5.0 Angstroms. Preferably, the crystal has a resolution determined by X-ray crystallography of better than about 4.0 Angstroms, more preferably better than about 3.0 Angstroms. Preferably the crystal belongs to space group  $P2_1$  and has unit cell dimensions  $a = 77.8 \text{ \AA}$ ,  $b = 70.9 \text{ \AA}$ ,  $c = 147.1 \text{ \AA}$ , and  $\beta = 102.5^\circ$ . Preferably, the crystal has atomic coordinates provided in Table 2.

[0011] In another aspect, the present invention provides a method for preparing a crystal of a complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab comprising preparing a solution containing the extracellular domain of EGFR and cetuximab Fab fragment, and growing the crystal. Preferably the pH of the solution is about 6.0 to about 8.0.

[0012] In another aspect, the present invention provides a method of identifying a mimetic of cetuximab comprising comparing a three-dimensional structure of the mimetic with a three-dimensional structure determined for the above crystal complex. Preferably, the three dimensional structure of the mimetic is compared with at least a subset of the coordinates provided in Table 2.

[0013] In one embodiment, identifying a mimetic is carried out by comparing the three-dimensional structure of the mimetic against the coordinates of at least one EGFR amino acid bound by cetuximab Fab. Such EGFR amino acid is selected from the group consisting of Gln 384, Gln 408, Ser 418, Ser 440, Lys 465, Ser 468, and Asn 469. In one embodiment, the locations of atoms of the mimetic that contact EGFR correspond to atoms of cetuximab that contact EGFR. In yet another embodiment, screening is carried out by comparing a three dimensional structure of a mimetic with the atomic coordinates of a region of EGFR selected from the group consisting of about amino acid residue 350 to about amino acid residue 354, about amino acid residue 380 to about amino acid residue 385, about amino acid residue 405 to about amino acid residue 420, about amino acid residue 435 to about amino acid residue 475 and combinations thereof.

[0014] The mimetic may be a small molecule, a peptide, or a polypeptide, preferably an antibody or a fragment thereof.

[0015] In another aspect of the invention, a mimetic that is an antibody or a fragment thereof is identified by introducing one or more substitutions in at least a single CDR region of cetuximab and/or at non-CDR amino acids of the antibody that interact with the CDR and affect its conformation. In one embodiment, at most a single substitution is made in each CDR. In another embodiment, substitution are made solely in CDR3 or at amino acids that affect the conformation of CDR3.

[0016] In another aspect, the present invention provides the above methods carried out with use of a computer.

[0017] The invention further provides a method for synthesizing the mimetic and assaying its binding or physiological activity to select EGFR antagonists useful for inhibiting EGFR function and treating EGFR-associated diseases or conditions. In an aspect of the invention, a mimetic is provided that inhibits tyrosine kinase activity of the receptor. In another aspect of the invention, the mimetic inhibits dimerization of EGFR expressed by a cell. Preferably, the mimetic blocks binding of EGF to EGFR. Mimetics of the invention bind to EGFR and inhibit EGFR functional activity, preferably to a similar or greater extent than cetuximab.

[0018] In another aspect, the present invention provides a computer-assisted method for identifying a mimetic of cetuximab comprising a processor, a data storage system, an input device, and an output device, comprising: inputting into the programmed computer through said input device data comprising the three-dimensional coordinates of at least a subset of the atoms of EGFR as set out in Table 2; providing a database of chemical and peptide structures stored in said computer data storage system; selecting from said database, using computer methods, structures having a portion that is structurally similar to said criteria data set; and outputting to said output device the selected chemical structures having a portion similar to said criteria data set.

[0019] In another aspect, the present invention provides a machine-readable medium having stored thereon a plurality of executable instructions to perform a method to identify a mimetic of cetuximab using a crystal of a receptor-antibody complex comprising a receptor-antibody complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab, the method comprising: comparing a three-dimensional structure of a mimetic

with a three dimensional structure an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab having an X-ray crystallography resolution of better than about 5.0 Angstroms.

[0020] Preferably the EGFR coordinates comprise at least a subset of the atomic coordinates of Table 2. In one embodiment, identifying a mimetic comprises comparing the three-dimensional structure of a mimetic with a three-dimensional structure of at least one EGFR amino acid bound by cetuximab Fab. In another embodiment identifying a mimetic comprises comparing a three dimensional structure of a mimetic with the atomic coordinates of a region of EGFR selected from the group consisting of about amino acid residue 350 to about amino acid residue 354, about amino acid residue 380 to about amino acid residue 385, about amino acid residue 405 to about amino acid residue 420, about amino acid residue 435 to about amino acid residue 475 and combinations thereof.

[0021] In another aspect, the present invention provides a machine-readable medium having stored thereon a plurality of executable instructions to perform a method for identifying a mimetic of cetuximab, the method comprising: introducing *in silico* substitutions in at least a single CDR region of cetuximab to obtain a pool of variants; and using a computer and at least a subset of the EGFR coordinates provided in Table 2 to select a variant with improved EGFR binding characteristics.

[0022] In another aspect, the present invention provides a cetuximab mimetic identified by any of the above methods.

[0023] In another aspect, the present invention provides a method of inhibiting EGFR comprising administering the identified mimetic.

[0024] In another aspect, the present invention provides a method of treating a disease or condition associated with EGFR expression comprising administering the identified mimetic. In one non-limiting embodiment, the present invention provides a method of inhibiting growth of a tumor cell that expresses EGFR comprising administering the above identified mimetics. In another embodiment, the present invention provides a method of treating a hyperproliferative diseases stimulated by a ligand of EGFR.

[0025] In another aspect, the present invention provides a method of treating psoriasis comprising administering the above identified mimetics.

### **Brief Description of the Figures**

[0026] Figure 1 provides pictures of the crystals of the present invention. In this figure crystals on the left (1a) are representative of those used to collect the data and solve the structure. On the right (1b) are examples of crystals grown from the same condition except without  $\text{CdCl}_2$ , which are substantially identical to that obtained in the presence of  $\text{CdCl}_2$ .

[0027] Figure 2 provides various characteristics of the crystals of the present invention.

[0028] Figure 3 provides crystal structures of EGFR and cetuximab Fab complex.

[0029] Figure 4 provides graphs depicting affinity of cetuximab Fab, and affinity of EGFR ligands for EGFR, and also provides a competition assay. Additional details are provided in the example below having the heading "BIAcore binding studies."

### **Detailed Description of the Invention**

[0030] The present invention provides a co-crystal of EGFR extracellular domain and cetuximab Fab fragment with a resolution that is preferably greater than about  $5\text{\AA}$ , more preferably greater than about  $4\text{\AA}$  and most preferably greater than about  $3\text{\AA}$ . The crystal preferably has a space group  $P2_1$  and unit cell dimensions of  $a = 77.8\text{\AA}$ ,  $b = 70.9\text{\AA}$ ,  $c = 147.1\text{\AA}$ ; and  $\beta = 102.5^\circ$ .

[0031] To obtain the crystal for which structural coordinates are shown Table 2, the entire extracellular region (*i.e.*, amino acids 1-618 of mature EGFR, including domains I, II, III and IV) is used, plus a C-terminal hexa-histidine tag (Ferguson, K.M. et al., 2000, Embo J 19, 4632-4643; Ferguson, K.M. et al., 2003, Mol Cell 11, 507-517). (See GenBank Accession No. 1NQLA). Cetuximab Fab contains the Fab fragment of Cetuximab, *i.e.*, the heavy and light chain variable region sequences of murine antibody M225 (U.S. App. Ser. No. 2004/0006212, incorporated herein by reference) with human IgG1  $\text{C}_{\text{H}}1$  heavy and kappa light chain constant domains. (Cetuximab includes all three IgG1 heavy chain constant domains.) The CDR regions of the heavy chain of Cetuximab have the following sequences: a CDR1 region with a sequence of N Y G V H, a CDR2 region with a sequence of V I W S G G N T D Y N T P F T S, and a CDR3 region with a sequence of A L T Y Y D Y E F A Y. The CDR regions of the light chain

of Cetuximab have the following sequences: a CDR1 region with a sequence of R A S Q S I G T N I H, a CDR2 region with a sequence of Y A S E S I S, and a CDR3 region with a sequence of Q Q N N N W P T T.

[0032] The sequences of the proteins in the crystal, *i.e.*, cetuximab Fab and the extracellular domain of EGFR, are also reported with the atomic coordinates of Table 2, except for amino acid positions at which the electron density map was insufficient to place all atoms of the actual amino acid side chain. At those positions, other amino acid side chains are designated.

[0033] Crystallization of the EGFR:cetuximab Fab complex may be carried out from a solution of cetuximab Fab and EGFR with various techniques, such as microbatch, hanging drop, sitting drop, sandwich drop, seeding and dialysis. The solution is prepared by combining EGFR extracellular domain with cetuximab Fab in a suitable buffer. A standard buffering agent such as Hepes, Tris, MES and acetate may be used. The buffer system may also be manipulated by addition of a salt such as sodium chloride, ammonium sulfate, sodium/potassium phosphate, ammonium acetate among others. Imidazole may also be used as a buffer. The concentration of the salt is preferably about 10mM to about 500mM, more preferably about 25 mM to about 100mM, and most preferably about 50mM. The pH of the buffer is preferably about 6 to about 8, more preferably about 7 to about 8. The concentration of the protein in the solution is preferably that of super-saturation to allow precipitation. The solution may optionally contain a protein stabilizing agent.

[0034] In one embodiment, the crystal is precipitated by contacting the solution with a reservoir that reduces the solubility of the proteins due to presence of precipitants, *i.e.*, reagents that induce precipitation. Such contacting may be carried out through vapor diffusion. Examples of precipitants include ammonium sulfate, ethanol, 3-ethyl-2,4 pentanediol, and glycols, particularly polyethanol glycol (PEG). The PEG utilized preferably has a molecular weight of about 400 to about 20,000, more preferably about 3000 Da, with a concentration of about 10 % to about 20 % , more preferably about 15 % (w/v). Some precipitants may act by making the buffer pH unfavorable for protein solubility.

[0035] The temperature during crystallization is preferably of about 0°C to about 30°C, more preferably about 20°C to about 30°C, and most preferably about 25°C. In addition to

generation of structure, the crystallization technique of the invention may also be used to increase purity of proteins.

[0036] Precipitation may also be carried out in the presence of a heavy metal such as cadmium to further improve analysis of the crystal after precipitation.

[0037] In one embodiment illustrated in the example, about 0.5  $\mu$ l (or microliter) protein at 11 mg/ml in 10 mM Hepes, 50 mM NaCl, pH 7.5 is contacted with 0.5  $\mu$ l (or microliter) reservoir solution of about 15 % PEG 3350, about 250 mM ammonium sulfate, about 10 mM cadmium chloride, about 100 mM imidazole and about pH 7.5. Essentially the same crystals are obtained without use of cadmium chloride. Crystals have also been grown at 15 % PEG 3450, 100 mM  $\text{CaCl}_2$ , 50 mM Sodium acetate, pH 5.0 and 15 % PEG 3450, 100 mM ammonium acetate, 50 mM sodium citrate, pH 5.0.

[0038] The atomic coordinates of the crystal of the present invention are disclosed in Table 2. The coordinates provide a three dimensional structure of the EGFR extracellular domain: cetuximab Fab complex of the crystal. The cetuximab Fab includes the portion of cetuximab which binds to the extracellular region of EGFR, and can be used to model the interaction of cetuximab and EGFR. Accordingly, the crystal and the deduced atomic coordinates allows for studying the binding interaction of cetuximab with EGFR and EGFR inhibition. The three dimensional structure further allows for identifying potential mimetics by screening potential mimetics against at least part of the structure (a subset of atoms provided in Table 2).

[0039] The three dimensional structure of EGFR: cetuximab Fab complex as defined by atomic coordinates is obtained from the X-ray diffraction pattern of the crystal and the electron density map derived therefrom. One method for determining the three dimensional structure is by molecular replacement which involves use of the structure of a closely related molecule or receptor ligand complex. An alternative method employs heavy atom derivatives.

[0040] One of skill in the art will also appreciate that the atomic coordinates provided are not precise, but are obtained from electron density measured for the crystal. Initial coordinates are determined by matching the protein backbone and side chains to the electron density map. The coordinates are refined by minimizing the overall energy of the protein (*e.g.*,

by adjusting bond lengths and angles), in view of the determined electron density. In some locations in the atomic structure, atoms of amino acid side chains may not be fully resolved due to, for example, solvent interactions and the like. Accordingly, the side chain that is modeled may differ from the actual side chain at that amino acid position. For the atomic coordinates set forth in Table 2, Arg 18 of the light chain and Gln 1 of the heavy chain of cetuximab Fab are modeled as Alanine. The present invention encompasses structures having root mean square deviations of backbone atoms of not more than about 1.5 Å, or more preferably not more than about 1.0 Å, or most preferably, not more than about 0.5 Å for residues of EGFR extracellular domain or cetuximab Fab that are used in identifying mimetics. The present invention encompasses variations within acceptable standards of error in the art for a crystal with the resolution disclosed herein.

[0041] It will also be appreciated that the origin of the atomic coordinates is arbitrarily defined. Accordingly, the same atomic structure can be represented by sets of coordinates that are numerically different, but that identify the same atomic positions. The present invention encompasses such alternative coordinate sets.

[0042] Identification of mimetics of cetuximab may be carried out with only a subset of the coordinates provided, such as those of amino acid residues of EGFR or cetuximab Fab that are associated in the complex.

[0043] Potential mimetics are examined against EGFR, particularly one or more of the above residues, through the use of computer modeling using a docking program. Such computer modeling allows for obtaining a positive initial indication of binding before synthesis and testing of the compound. If the testing shows sufficient interaction, then the compound may be synthesized and tested as a potential candidate. There is no limitation to the source of potential mimetics. For example, potential mimetics include structural databases of small molecules and other ligands represented *in silico*, as well as commercially available libraries of small molecules that can be similarly modeled. Potential mimetics further include peptides and macromolecules such as proteins, polypeptides, preferably antibodies or antibody fragments, synthetic polymer backbones having amino acid-like functional groups, and the like. Such potential mimetics may have defined structure, or be modeled on the basis of their similarity to other macromolecules of known structure. Iterative methods may be employed to vary one or more of the functional

groups to improve the fit of the potential mimetic with EGFR. Those substances identified as mimetics, if not otherwise available to be tested for EGFR antagonist activity, may be synthesized.

[0044] In preferred embodiments, the locations of at least some atoms of cetuximab mimetics that contact EGFR correspond to the locations of atoms of cetuximab that contact EGFR. The correspondence is preferably within about 2.0 Å, more preferably within about 1.0 Å, and most preferably with about 0.5 Å. The atoms usually interact with EGFR in a manner similar to the corresponding atoms of cetuximab Fab (*i.e.*, polar, basic, acidic, hydrophobic). The mimetics may contain various numbers of such corresponding atoms, and binding of the mimetic to EGFR may be completely or only partially dependent on such corresponding interactions. In certain embodiments, such atomic interactions with EGFR may be supplemented by interactions of other atoms of the mimetic that also interact with EGFR. The binding ability of the mimetics can be evaluated by various computer programs as disclosed herein.

[0045] Docking may be accomplished by using software such as Quanta and Sybyl (manual model building software), followed by energy minimization and molecular dynamics with standard molecular mechanics force fields, such as CHARMM and AMBER. Specialized programs for docking include GRAM, GRID, Flexx, Glide, GOLD, MCSS, DOCK or AUTODOCK (*See e.g.* USP 5,856,116 and 6,087,478; Jorgensen W.L., 2004, Science 303, 1813-1818). Such procedure includes computer fitting of potential antagonists to EGFR to determine how the three dimensional structure of EGFR and the chemical properties of each amino acid interfere with EGFR activation, and to estimate attraction, repulsion and steric hindrance of the binding. Generally, tighter fits are preferred in that they are more likely to be effective when administered *in vivo*, and would be more selective for EGFR, minimizing binding to other receptors. Many of these programs also consider adsorption, distribution, metabolic and excretion characteristics of the molecules.

[0046] The docking program may be connected to a structure generator (such as SYNOPSIS) to perform *de novo* screening. An alternative to *de novo* screening, is creation of structures based on the binding site such as with programs including LUDI, SPROUT and



BOMB, which allow a user to put a substituent in a binding site and then build up the substituent (Jorgensen W.L., 2004).

[0047] One of skill in the art would appreciate that the above screening methods may also be carried out manually, by building an actual three dimensional model based on the coordinates, and then determining desirable antagonists based on that model visually.

[0048] Of particular interest for designing mimetics are those amino acids that overlap with the binding site of EGF or TGF- $\alpha$  to EGFR. Such binding may interfere with the ligand-induced dimerization of the receptor or inhibit binding of the ligand to EGFR altogether.

[0049] Domains I and III of EGFR are responsible for binding of EGF to the receptor, and are of interest in designing antagonists. Of the amino acids of EGFR, some are involved in direct hydrogen bonding with cetuximab Fab. These amino acids include Ser 468, Asn 469, Arg 353, Gln 384, Gln 408, Ser 418, Ser 440 and/or Lys 465. Ser468 and Asn 469 are involved in main-chain hydrogen bonds, *i.e.*, the nature of the side chain is not directly relevant. Antagonists may be designed to bind to a few, most or none of these amino acids. Other amino acids of EGFR are in contact to some lesser degree with cetuximab Fab. These amino acids include: Pro 349, Arg 353, Leu 382, His 409, Phe 412, Val 417, Ser 418, Ile 438, Gly 441, Lys 443, Ile 466, Ile 467, Gln 471 and Asn 473. Of the nine amino acids between 465 and 473, eight of them are in some contact with cetuximab Fab. This region of EGFR is also ideal for screening of antagonists, particularly since residues 467 and 468 are in contact with both the heavy and light chains of cetuximab.

[0050] Cetuximab Fab does not bind to amino acids at positions 325, 346, 348, 350, 354-357 and 411, despite these amino acids being involved in EGF/TGF- $\alpha$  binding. Screening may be carried out against these positions, or only for the positions bound by cetuximab Fab, or both. If screening is carried out based on the binding of cetuximab Fab to EGFR, such screening may be carried out in regions of amino acids of about 350 to about 354, amino acids of about 380 to about 385, amino acids of about 405 to about 420, amino acids of about 435 to about 475 and combinations thereof. One of skill in the art would appreciate that screening may simply be carried out against domains I and III of EGFR based on the crystal structure provided, and general area of the binding pocket, without focus on any particular amino acids bound by cetuximab Fab and/or ligands.

[0051] The mimetics, both peptides and small organic molecules, preferably antibody and antibody fragments, bind to EGFR and mimic effects of cetuximab both *in vivo* and *in vitro*. In addition to peptides and small organic molecules, the mimetic may be a sugar. The mimetic may also be a combination of peptides/small molecules/sugars, such as a peptide having a synthetic backbone. The mimetic may be designed based on criteria such as affinity for EGFR, desirable efficacy and/or desirable selectivity. These mimetics have at least a single physiological or binding activity of cetuximab, which activity can be tested by assays provided further below.

[0052] As used herein, "mimetics" include cetuximab mimetics with modifications that retain specificity for EGFR. Such modifications include, but are not limited to, conjugation to an effector molecule such as a chemotherapeutic agent (*e.g.*, cisplatin, taxol, doxorubicin) or cytotoxin (*e.g.*, a protein, or a non-protein organic chemotherapeutic agent). The mimetics can be modified by conjugation to detectable reporter moieties. Also included are mimetics with alterations that affect non-binding characteristics such as half-life (*e.g.*, pegylation).

[0053] Proteins and non-protein agents may be conjugated to the mimetics by methods that are known in the art. Conjugation methods include direct linkage, linkage via covalently attached linkers, and specific binding pair members (*e.g.*, avidin-biotin). Such methods include, for example, that described by Greenfield et al., Cancer Research 50, 6600-6607 (1990) for the conjugation of doxorubicin and those described by Arnon et al., Adv. Exp. Med. Biol. 303, 79-90 (1991) and by Kiseleva et al., Mol. Biol. (USSR)25, 508-514 (1991) for the conjugation of platinum compounds.

[0054] In one embodiment, a library of small organic molecules is used to screen for mimetics *in silico*. In another embodiment, cetuximab is used as a starting candidate, and varied to generate a cetuximab variant with desirable properties. Such variant of cetuximab may be a scFv, a Fab, diabody, or IgG. For example, conservative amino acid substitutions may be made at one or more of residues of cetuximab Fab which bind EGFR: light chain (LC) residues Asn 91, Trp 94; heavy chain (HC) residues Gly 54, Tyr 102, Trp 52, Asp 103.

[0055] A conservative amino acid substitution is defined as a change in the amino acid composition by way of changing one or two amino acids of a peptide, polypeptide or protein, or fragment thereof. The substitution is of amino acids with generally similar properties (*e.g.*,

acidic, basic, aromatic, size, positively or negatively charged, polarity, non-polarity) such that the substitutions do not substantially alter peptide, polypeptide or protein characteristics (*e.g.*, charge, isoelectric point, affinity, avidity, conformation, solubility) or activity. Typical substitutions that may be performed for such conservative amino acid substitution may be among the groups of amino acids as follows:

glycine (G), alanine (A), valine (V), leucine (L) and isoleucine (I);

aspartic acid (D) and glutamic acid (E);

alanine (A), serine (S) and threonine (T);

histidine (H), lysine (K) and arginine (R);

asparagine (N) and glutamine (Q);

phenylalanine (F), tyrosine (Y) and tryptophan (W).

[0056] If the binding is not as tight in regard to one or more of the residues, less conservative substitutions may be made at those residues to optimize the binding. For example, an amino acid with a hydrophilic group may be substituted for one with a hydrophobic group.

[0057] In one embodiment, a mixture of all or some amino acids is introduced to synthesize variants of cetuximab randomly at specified positions *in silico*: Tyr 102 (HC), Trp 52 (HC), and Asp 103 (HC) of cetuximab. Only these amino acid residues are involved in side chain hydrogen bonds, and thus are candidates for specific mutations aimed at modifying direct interactions. Such variation, where all 20 amino acids are used, would result in about  $20^3$  variants which can then be screened. If only conservative substitutions are made, the variation would be much less, about  $3^3$ . Conservative and non-conservative substitutions at other positions in the CDRs of cetuximab that do not bind to EGFR directly should also be considered. For example, direct interactions between contact residues (*e.g.*, main chain - main chain, main chain - side chain, side chain - side chain contacts) can be modified by introducing changes at amino acid positions that affect the position of cetuximab side chain and main chain atoms involved in direct interactions with EGFR. In one embodiment, at most a single substitution is made in each CDR. In another embodiment a single substitution is made in the heavy chain CDR3 region of cetuximab.

[0058] After such screening and selection, the selected mimetic may be synthesized, and various assays carried out to measure the biological or physiological activity of the mimetic to

select an EGFR antagonist. A preferred EGFR antagonist has one or more of the following properties: inhibits EGFR tyrosine kinase activity; blocks ligand binding to EGFR; inhibits EGFR dimerization (homodimerization with EGFR or heterodimerization with another EGFR family receptor subunit); inhibits EGFR substrate phosphorylation; inhibits EGFR mediated gene activation; inhibits growth or proliferation of a cell the expresses EGFR. Preferably, the antagonist has substantially similar or improved effectiveness as an EGFR antagonist as compared to Cetuximab.

[0059] Tyrosine kinase inhibition can be determined using well-known methods; for example, by measuring the autophosphorylation level of recombinant kinase receptor, and/or phosphorylation of natural or synthetic substrates. Thus, phosphorylation assays are useful in determining EGFR antagonists of the present invention. Phosphorylation can be detected, for example, using an antibody specific for phosphotyrosine in an ELISA assay or on a western blot. Some assays for tyrosine kinase activity are described in Panek et al., J. Pharmacol. Exp. Thera. (1997) 283: 1433-44 and Batley et al., Life Sci. (1998) 62: 143-50.

[0060] In addition, methods for detection of protein expression can be utilized to determine EGFR antagonists, wherein the proteins being measured are regulated by EGFR tyrosine kinase activity. These methods include immunohistochemistry (IHC) for detection of protein expression, fluorescence in situ hybridization (FISH) for detection of gene amplification, competitive radioligand binding assays, solid matrix blotting techniques, such as Northern and Southern blots, reverse transcriptase polymerase chain reaction (RT-PCR) and ELISA. See, e.g., Grandis et al., Cancer, (1996) 78:1284-92; Shimizu et al., Japan J. Cancer Res., (1994) 85:567-71; Sauter et al., Am. J. Path., (1996) 148:1047-53; Collins, Glia, (1995) 15:289-96; Radinsky et al., Clin. Cancer Res., (1995) 1:19-31; Petrides et al., Cancer Res., (1990) 50:3934-39; Hoffmann et al., Anticancer Res., (1997) 17:4419-26; Wikstrand et al., Cancer Res., (1995) 55:3140-48.

[0061] The ability of a mimetic to block ligand binding can be measured, for example, by an *in vitro* competitive assay such as is illustrated in Figure 4. In this assay, a ligand of EGFR such as EGF is immobilized, and a binding assay is carried to determine the effectiveness of the mimetic to competitively inhibit binding of EGFR to the immobilized ligand.

[0062] *In vivo* assays can also be utilized to determine EGFR antagonists. For example, receptor tyrosine kinase inhibition can be observed by mitogenic assays using cell lines stimulated with receptor ligand in the presence and absence of inhibitor. For example, A431 cells (American Type Culture Collection (ATCC), Rockville, MD) stimulated with EGF can be used to assay EGFR inhibition. Another method involves testing for inhibition of growth of EGFR-expressing tumor cells, using for example, human tumor cells injected into a mouse. See U.S. Patent No. 6,365,157 (Rockwell et al.).

[0063] The present invention provides for coordinates of the co-crystal of the present invention on a computer readable format such as a magnetic disk, CD-ROM or a hard drive.

[0064] In another aspect, the present invention provides methods of treating EGFR-dependent diseases and conditions in mammals by administering a therapeutically effective amount of a mimetic of cetuximab. One skilled in the art would easily be able to diagnose such conditions and disorders using known, conventional tests. Treatment means any treatment of a disease in an animal and includes: (1) preventing the disease from occurring in a mammal which may be predisposed to the disease but does not yet experience or display symptoms of the disease; *e.g.*, prevention of the outbreak of the clinical symptoms; (2) inhibiting the disease, *e.g.*, arresting its development; or (3) relieving the disease, *e.g.*, causing regression of the symptoms of the disease. Therapeutically effective amount for the treatment of a disease means that amount which, when administered to a mammal in need thereof, is sufficient to effect treatment, as defined above, for that disease. A cetuximab mimetic of the invention may be administered with an antineoplastic agent such as, for example, a chemotherapeutic.

[0065] Cetuximab mimetics of the present invention are useful for treating tumors that express EGFR. EGFR expressing tumors are characteristically sensitive to EGF present in their environment, and can further be stimulated by tumor produced EGF or TGF- $\alpha$ . While not intending to be bound to any particular mechanism, the diseases and conditions that may be treated or prevented by the present methods include, for example, those in which tumor growth is stimulated through an EGFR paracrine and/or autocrine loop. The method is therefore effective for treating a solid tumor that is not vascularized, or is not yet substantially vascularized.

[0066] In another aspect of the invention, cetuximab mimetics are used to inhibit tumor-associated angiogenesis. EGFR stimulation of vascular endothelium is associated with vascularization of tumors. Typically, vascular endothelium is stimulated in a paracrine fashion by EGF and/or TGF- $\alpha$  from other sources (*e.g.*, tumor cells). Accordingly, the cetuximab mimetics are effective for treating subjects with vascularized tumors or neoplasms.

[0067] Tumors that may be treated include primary tumors and metastatic tumors, as well as refractory tumors. Refractory tumors include tumors that fail to respond or are resistant to treatment with chemotherapeutic agents alone, antibodies alone, radiation alone or combinations thereof. Refractory tumors also encompass tumors that appear to be inhibited by treatment with such agents, but recur up to five years, sometimes up to ten years or longer after treatment is discontinued. The tumors may express EGFR at normal levels or they may overexpress EGFR at levels, for example, that are at least 10, 100, or 1000 times normal levels.

[0068] Examples of tumor that express EGFR and are stimulated by a ligand of EGFR include carcinomas, gliomas, sarcomas, adenocarcinomas, adenosarcomas, and adenomas. Such tumors can occur in virtually all parts of the body, including, for example, breast, heart, lung, small intestine, colon, spleen, kidney, bladder, head and neck, ovary, prostate, brain, pancreas, skin, bone, bone marrow, blood, thymus, uterus, testicles, cervix or liver. Some tumors observed to overexpress EGFR that may be treated according to the present invention include, but are not limited to, colorectal and head and neck tumors, especially squamous cell carcinoma of the head and neck, brain tumors such as glioblastomas, and tumors of the lung, breast, pancreas, esophagus, bladder, kidney, ovary, cervix, and prostate. Non-limiting examples of tumors observed to have constitutively active (*i.e.*, unregulated) receptor tyrosine kinase activity include gliomas, non-small-cell lung carcinomas, ovarian carcinomas and prostate carcinomas. Other examples of tumors include Kaposi's sarcoma, CNS neoplasms, neuroblastomas, capillary hemangioblastomas, meningiomas and cerebral metastases, melanoma, gastrointestinal and renal carcinomas and sarcomas, rhabdomyosarcoma, glioblastoma, preferably glioblastoma multiforme, and leiomyosarcoma.

[0069] The present invention also provides a method of treating a non-cancer hyperproliferative disease in a mammal comprising administering to the mammal an effective amount of the antibody of the present invention. As disclosed herein, "hyperproliferative

disease" is defined as a condition caused by excessive growth of non-cancer cells that express a member of the EGFR family of receptors. The excess cells generated by a hyperproliferative disease express EGFR at normal levels or they may overexpress EGFR.

[0070] The types of hyperproliferative diseases that can be treated in accordance with the invention are any hyperproliferative diseases that are stimulated by a ligand of EGFR or mutants of such ligands. Examples of hyperproliferative disease include psoriasis, actinic keratoses, and seborrheic keratoses, warts, keloid scars, and eczema. Also included are hyperproliferative diseases caused by virus infections, such as papilloma virus infection. For example, psoriasis comes in many different variations and degrees of severity. Different types of psoriasis display characteristics such as pus-like blisters (pustular psoriasis), severe sloughing of the skin (erythrodermic psoriasis), drop-like dots (guttate psoriasis) and smooth inflamed lesions (inverse psoriasis). The treatment of all types of psoriasis (e. g., psoriasis vulgaris, psoriasis pustulosa, psoriasis erythrodermica, psoriasis arthropathica, parapsoriasis, palmoplantar pustulosis) is contemplated by the invention.

[0071] Administering the cetuximab mimetic includes delivering the mimetic to a mammal by any method that may achieve the result sought. The term mammal as used herein is intended to include, but is not limited to, humans, laboratory animals, domestic pets and farm animals. The mimetic may be administered, for example, orally, parenterally (intravenously or intramuscularly), topically, transdermally or by inhalation. Topical administration may be preferred for certain hyperproliferative disorders.

[0072] In an embodiment of the invention, cetuximab mimetic can be administered in combination with one or more other anti-neoplastic agents, such as chemotherapeutic agents. Radiation can also be employed. For examples of combination therapies, see, *e.g.*, U.S. Patent No. 6,217,866 (Schlessinger et al.) (Anti-EGFR antibodies in combination with anti-neoplastic agents); WO 99/60023 (Waksal et al.) (Anti-EGFR antibodies in combination with radiation). Any suitable anti-neoplastic agent can be used, such as a chemotherapeutic agent, radiation or combinations thereof. The anti-neoplastic agent can be an alkylating agent or an anti-metabolite. Examples of alkylating agents include, but are not limited to, cisplatin, cyclophosphamide, melphalan, and dacarbazine. Examples of anti-metabolites include, but not limited to, doxorubicin, daunorubicin, paclitaxel, irinotecan (CPT-11), and topotecan. When the

agent is radiation, the source of the radiation can be either external (external beam radiation therapy – EBRT) or internal (brachytherapy – BT) to the patient being treated. The dosage administered depends on numerous factors, including, for example, the type of agent, the type and severity tumor being treated and the route of administration of the agent. It should be emphasized, however, that the present invention is not limited to any particular dose.

[0073] For treatment of hyperproliferative disease, the cetuximab mimetic can be combined with any conventional treatment agent. For example, when the hyperproliferative disease is psoriasis, there are a variety of conventional systemic and topical agents available. Systemic agents for psoriasis include methotrexate, and oral retinoids, such as acitretin, etretinate, and isotretinoin. Other systemic treatments of psoriasis include hydroxyurea, NSAIDs, sulfasalazine, and 6-thioguanine. Antibiotics and antimicrobials can be used to treat or prevent infection that can cause psoriasis to flare and worsen. Topical agents for psoriasis include anthralin, calcipotriene, coal tar, corticosteroids, retinoids, keratolytics, and tazarotene. Topical steroids are one of the most common therapies prescribed for mild to moderate psoriasis. Topical steroids are applied to the surface of the skin, but some are injected into the psoriasis lesions.

[0074] Hyperproliferative disease treatments further include administration of the cetuximab mimetic in combination with phototherapy. Phototherapy includes administration of any wavelength of light that reduces symptoms of the hyperproliferative disease, as well as photoactivation of a chemotherapeutic agent (photochemotherapy). For further discussion of treatment of hyperproliferative disorders, see WO 02/11677 (Teufel et al.) (Treatment of hyperproliferative diseases with epidermal growth factor receptor antagonists).

[0075] In certain embodiments of the invention, cetuximab mimetics of the invention can be administered with EGFR antagonists and/or antagonists of other receptors involved in tumor growth or angiogenesis. The receptor antagonists may bind to the receptor or the ligand to block receptor-ligand binding, or the receptor antagonists may otherwise neutralize the receptor tyrosine kinase. Ligands of EGFR include, for example, EGF, TGF- $\alpha$  amphiregulin, heparin-binding EGF (HB-EGF) and betacellulin. EGF and TGF- $\alpha$  are thought to be the main endogenous ligands that result in EGFR-mediated stimulation, although TGF- $\alpha$  has been shown



to be more potent in promoting angiogenesis. Accordingly, EGFR antagonists include antibodies that bind to such ligands and thereby block binding to and activation of EGFR.

[0076] The cetuximab mimetic can be used in combination with a VEGFR antagonist. In one embodiment of the invention, a cetuximab mimetic is used in combination with a receptor antagonist that binds specifically to VEGFR-2/KDR receptor (PCT/US92/01300, filed Feb. 20, 1992; Terman et al., *Oncogene* 6: 1677-1683 (1991)). In another embodiment of the invention, a cetuximab mimetic is used in combination with a receptor antagonist that binds specifically to VEGFR-1/Flt-1 receptor (Shibuya M. et al., *Oncogene* 5, 519-524 (1990)). In another embodiment, a cetuximab mimetic is used in combination with a receptor antagonist that binds to a VEGFR ligand. For example, Avastin<sup>®</sup> (bevacizumab) is an antibody that binds VEGF. Particularly preferred are antigen-binding proteins that bind to the extracellular domain of VEGFR-1 or VEGFR-2 and block binding by ligand (VEGF or PlGF), and/or neutralize VEGF-induced or PlGF-induced activation. For example, Mab IMC-1121 binds to soluble and cell surface-expressed KDR. Mab IMC-1121 comprises the V<sub>H</sub> and V<sub>L</sub> domains obtained from a human Fab phage display library. (See WO 03/075840) In another example, ScFv 6.12 binds to soluble and cell surface-expressed Flt-1. ScFv 6.12 comprises the V<sub>H</sub> and V<sub>L</sub> domains of mouse monoclonal antibody MAb 6.12. A hybridoma cell line producing MAb 6.12 has been deposited as ATCC number PTA-3344.

[0077] In another embodiment, a cetuximab mimetic is administered with an antagonist of insulin-like growth factor receptor (IGFR). In certain tumor cells, inhibition of EGFR function can be compensated by upregulation of other growth factor receptor signaling pathways, and particularly by IGFR stimulation. Further, inhibition of IGFR signaling results in increased sensitivity of tumor cells to certain therapeutic agents. Stimulation of either EGFR or IGFR results in phosphorylation of common downstream signal transduction molecules, including Akt and p44/42, although to different extents. Accordingly, in an embodiment of the invention, an IGFR antagonist (*e.g.*, an antibody that binds to IGF or IGFR and neutralizes the receptor) is coadministered with a cetuximab mimetic of the invention, thereby blocking a second input into the common downstream signaling pathway (*e.g.*, inhibiting activation of Akt and/or p44/42). An example of a human antibody specific for IGFR is IMC-A12 (See WO 2005/016970).

[0078] Other examples of growth factor receptors involved in tumorigenesis against which antagonists may be directed are the receptors for platelet-derived growth factor (PDGFR), hepatocyte growth factor (HGFR), nerve growth factor (NGFR), fibroblast growth factor (FGFR), and macrophage stimulating protein (RON).

[0079] The cetuximab mimetics can also be administered with intracellular RTK antagonists that inhibit activity of RTKs or their associated downstream signaling elements that are involved in tumor growth or tumor-associated angiogenesis. The intracellular RTK antagonists are preferably small molecules. Some examples of small molecules include organic compounds, organometallic compounds, salts of organic compounds and organometallic compounds, and inorganic compounds. Atoms in a small molecule are linked together via covalent and ionic bonds; the former is typical for small organic compounds such as small molecule tyrosine kinase inhibitors and the latter is typical of small inorganic compounds. The arrangement of atoms in a small organic molecule may represent a chain, *e.g.* a carbon-carbon chain or carbon-heteroatom chain or may represent a ring containing carbon atoms, *e.g.* benzene or a polycyclic system, or a combination of carbon and heteroatoms, *i.e.*, heterocycles such as a pyrimidine or quinazoline. Although small molecules can have any molecular weight, they generally include molecules that would otherwise be considered biological molecules, except their molecular weight is not greater than 650 D. Small molecules include both compounds found in nature, such as hormones, neurotransmitters, nucleotides, amino acids, sugars, lipids, and their derivatives as well as compounds made synthetically, either by traditional organic synthesis, bio-mediated synthesis, or a combination thereof. *See e.g.* Ganesan, *Drug Discov. Today* 7(1): 47-55 (Jan. 2002); Lou, *Drug Discov. Today*, 6(24): 1288-1294 (Dec. 2001).

[0080] More preferably, the small molecule to be used as an intracellular RTK antagonist according to the present invention is an intracellular EGFR antagonist that competes with ATP for binding to EGFR's intracellular binding region having a kinase domain or to proteins involved in the signal transduction pathways of EGFR activation. Examples of such signal transduction pathways include the ras-mitogen activated protein kinase (MAPK) pathway, the phosphatidylinositol-3 kinase (PI3K)-Akt pathway, the stress-activated protein kinase (SAPK) pathway, and the signal transducers and activators of transcription (STAT) pathways. Non-limiting examples of proteins involved in such pathways (and to which a small molecule

EGFR antagonist according to the present invention can bind) include GRB-2, SOS, Ras, Raf, MEK, MAPK, and matrix metalloproteinases (MMPs).

[0081] One example of a small molecule EGFR antagonist is IRESSA<sup>TM</sup> (ZD1939), which is a quinoxaline derivative that functions as an ATP-mimetic to inhibit EGFR. *See* U.S. Patent No. 5,616,582 (Zeneca Limited); WO 96/33980 (Zeneca Limited) at p. 4; *see also*, Rowinsky *et al.*, Abstract 5 presented at the 37th Annual Meeting of ASCO, San Francisco, CA, 12-15 May 2001; Anido *et al.*, Abstract 1712 presented at the 37th Annual Meeting of ASCO, San Francisco, CA, 12-15 May 2001. Another example of a small molecule EGFR antagonist is TARCEVA<sup>TM</sup> (OSI-774), which is a 4-(substitutedphenylamino)quinoxaline derivative [6,7-Bis(2-methoxy-ethoxy)-quinazolin-4-yl]- (3-ethynyl-phenyl)amine hydrochloride] EGFR inhibitor. *See* WO 96/30347 (Pfizer Inc.) at, for example, page 2, line 12 through page 4, line 34 and page 19, lines 14-17. *See also* Moyer *et al.*, *Cancer Res.*, 57: 4838-48 (1997); Pollack *et al.*, *J. Pharmacol.*, 291: 739-48 (1999). TARCEVA<sup>TM</sup> may function by inhibiting phosphorylation of EGFR and its downstream PI3/Akt and MAP (mitogen activated protein) kinase signal transduction pathways resulting in p27-mediated cell-cycle arrest. *See* Hidalgo *et al.*, Abstract 281 presented at the 37th Annual Meeting of ASCO, San Francisco, CA, 12-15 May 2001.

[0082] Other small molecules are also reported to inhibit EGFR, many of which are thought to be to the tyrosine kinase domain of an EGFR. Some examples of such small molecule EGFR antagonists are described in WO 91/116051, WO 96/30347, WO 96/33980, WO 97/27199 (Zeneca Limited), WO 97/30034 (Zeneca Limited), WO 97/42187 (Zeneca Limited), WO 97/49688 (Pfizer Inc.), WO 98/33798 (Warner Lambert Company), WO 00/18761 (American Cyanamid Company), and WO 00/31048 (Warner Lambert Company). Examples of specific small molecule EGFR antagonists include CI-1033 (Pfizer), which is a quinoxaline (N-[4-(3-chloro-4-fluoro-phenylamino)-7-(3-morpholin-4-yl-propoxy)-quinazolin-6-yl]-acrylamide) inhibitor of tyrosine kinases, particularly EGFR and is described in WO 00/31048 at page 8, lines 22-6; PKI166 (Novartis), which is a pyrrolopyrimidine inhibitor of EGFR and is described in WO 97/27199 at pages 10-12; GW2016 (GlaxoSmithKline), which is an inhibitor of EGFR and HER2; EKB569 (Wyeth), which is reported to inhibit the growth of tumor cells that overexpress EGFR or HER2 *in vitro* and *in vivo*; AG-1478 (Tryphostin), which is a quinazoline small molecule that inhibits signaling from both EGFR and erbB-2; AG-1478 (Sugen), which is bisubstrate inhibitor that also inhibits protein kinase CK2; PD 153035 (Parke-Davis) which is

reported to inhibit EGFR kinase activity and tumor growth, induce apoptosis in cells in culture, and enhance the cytotoxicity of cytotoxic chemotherapeutic agents; SPM-924 (Schwarz Pharma), which is a tyrosine kinase inhibitor targeted for treatment of prostate cancer; CP-546,989 (OSI Pharmaceuticals), which is reportedly an inhibitor of angiogenesis for treatment of solid tumors; ADL-681, which is a EGFR kinase inhibitor targeted for treatment of cancer; PD 158780, which is a pyridopyrimidine that is reported to inhibit the tumor growth rate of A4431 xenografts in mice; CP-358,774, which is a quinazoline that is reported to inhibit autophosphorylation in HN5 xenografts in mice; ZD1839, which is a quinazoline that is reported to have antitumor activity in mouse xenograft models including vulvar, NSCLC, prostate, ovarian, and colorectal cancers; CGP 59326A, which is a pyrrolopyrimidine that is reported to inhibit growth of EGFR-positive xenografts in mice; PD 165557 (Pfizer); CGP54211 and CGP53353 (Novartis), which are dianilnophthalimides. Naturally derived EGFR tyrosine kinase inhibitors include genistein, herbimycin A, quercetin, and erbstatin.

[0083] Further small molecules reported to inhibit EGFR and that are therefore within the scope of the present invention are tricyclic compounds such as the compounds described in U.S. Patent No. 5,679,683; quinazoline derivatives such as the derivatives described in U.S. Patent No. 5,616,582; and indole compounds such as the compounds described in U.S. Patent No. 5,196,446.

[0084] In another embodiment, the EGFR antagonist can be administered in combination with one or more suitable adjuvants, such as, for example, cytokines (IL-10 and IL-13, for example) or other immune stimulators, such as, but not limited to, chemokine, tumor-associated antigens, and peptides. See, *e.g.*, Larrivée et al., *supra*. It should be appreciated, however, that administration of only a cetuximab mimetic is sufficient to prevent, inhibit, or reduce the progression of the tumor in a therapeutically effective manner.

[0085] For combination therapies, the cetuximab mimetic and anti-neoplastic agent or receptor antagonist may be administered concomitantly or sequentially.

[0086] This invention also provides a pharmaceutical composition/formulation containing a cetuximab mimetic and a pharmaceutically acceptable carrier. Carrier as used herein include pharmaceutically acceptable carriers, excipients, or stabilizers which are nontoxic to the cell or mammal being exposed thereto at the dosages and concentrations employed. Often

the physiologically acceptable carrier is an aqueous pH buffered solution. Examples of physiologically acceptable carriers include buffers such as phosphate, citrate and other organic acids; antioxidants including ascorbic acid; low molecular weight (less than about 10 residues) polypeptide; proteins, such as serum albumin, gelatin; hydrophilic polymers such as polyvinylpyrrolidone; amino acids such as glycine, glutamine, asparagine, arginine or lysine; monosaccharides, disaccharides, and other carbohydrates including glucose, mannose, or dextrans; chelating agents such as EDTA; sugar alcohols such as mannitol or sorbitol; salt forming counterions such as sodium; and/or nonionic surfactants such as TWEEN®, polyethylene glycol (PEG), and PLURONICS®.

[0087] The active ingredients may also be entrapped in microcapsules prepared, for example, by interfacial polymerization, for example, hydroxymethylcellulose or gelatin-microcapsules and poly(methylmethacrylate) microcapsules, respectively, in colloidal drug delivery systems (for example, liposomes, albumin microspheres, microemulsions, nanoparticles, and nanocapsules) or in macroemulsions. The formulations to be used for *in vivo* administration must be sterile. This is readily accomplished by filtration through sterile filtration membranes. Sustained-release preparations may be prepared. Suitable examples of sustained-release preparations include semipermeable matrices of solid hydrophobic polymers containing the antibody, which matrices are in the form of shaped articles, *e.g.*, films, or microcapsules. Examples of sustained-release matrices include polyesters, hydrogels (for example, poly(2-hydroxyethyl-methacrylate), or poly(vinylalcohol)), polylactides (U.S. Pat. No. 3,773,919), copolymers of L-glutamic acid and  $\gamma$ -ethyl-L-glutamate, non-degradable ethylene-vinyl acetate, degradable lactic acid-glycolic acid copolymers such as the LUPRON DEPOT® (injectable microspheres composed of lactic acid-glycolic acid copolymer and leuprolide acetate), and poly-D-(-)-3-hydroxybutyric acid. While polymers such as ethylene-vinyl acetate and lactic acid-glycolic acid enable release of molecules for over 100 days, certain hydrogels release proteins for shorter time periods.

[0088] The present invention also includes kits for inhibiting tumor growth and/or tumor-associated angiogenesis comprising a therapeutically effective amount of a cetuximab mimetic. The kits can further contain any suitable antagonist of, for example, another growth factor receptor involved in tumorigenesis or angiogenesis (*e.g.*, VEGFR-1/Flt-1, VEGFR-2, PDGFR, IGFR, NGFR, FGFR, etc, as described above). Alternatively, or in addition, the kits of

the present invention can further comprise an anti-neoplastic agent. Examples of suitable anti-neoplastic agents in the context of the present invention have been described herein. The kits of the present invention can further comprise an adjuvant; examples have also been described above.

[0089] Moreover, included within the scope of the present invention is use of the present antibodies *in vivo* and *in vitro* for investigative or diagnostic methods, which are well known in the art. The diagnostic methods include kits, which contain mimetics of the present invention.

[0090] Accordingly, the mimetics can be used *in vivo* and *in vitro* for investigative, diagnostic, prophylactic, or treatment methods, which are well known in the art. Of course, it is to be understood and expected that variations in the principles of invention herein disclosed can be made by one skilled in the art and it is intended that such modifications are to be included within the scope of the present invention.

[0091] All references mentioned herein are incorporated by reference.

## EXAMPLES

[0092] The following examples are offered for illustrative purposes only, and are not intended to limit the scope of the present invention in any way.

[0093] **Protein expression and purification.** sEGFR was produced and purified from baculovirus-infected Sf9 cells as described by Ferguson, K.M. et al., 2000, *Embo J* 19, 4632-4643, and was used without modification of its glycosylation state. This sEGFR was further purified by size exclusion chromatography (SEC) using a SEC250 column (BioRad) pre-equilibrated with 25 mM HEPES, 100 mM NaCl, pH 7.5 and concentrated to 6.2 mg/ml. Cetuximab Fab fragment was prepared by treatment of the IgG protein with papain. The IgG protein (20 mg/ml) was incubated with papain (1:1000 w:w) at 37°C for one hour and the digestion was terminated by addition of iodoacetamide (75 mM final concentration). The reaction mixture was loaded onto a Protein-A column and the flow-through fraction containing the Fab fragments was collected and concentrated. The cetuximab Fab was fractionated by SEC and mixed with sEGFR to give a two fold molar excess of Fab over sEGFR. Excess Fab was separated from the sEGFR:Fab complex using the same SEC column. The peak fractions

containing the sEGFR:Fab complex (as confirmed by SDS-PAGE), were concentrated to 11 mg/ml.

[0094] **Crystallization and data collection.** The sEGFR:Fab complex was buffer-exchanged into 25mM HEPES, pH 7.5, containing 50mM NaCl, and crystallized by the hanging drop method from a drop containing equal parts of a 78  $\mu$ M sEGFR:Fab complex solution and reservoir solution of 15 % PEG3350, 250 mM  $(\text{NH}_4)_2\text{SO}_4$ , 100 mM imidazole, 10 mM  $\text{CdCl}_2$ , pH 7.5. Streak seeding was used to produce large (0.08 X 0.08 X 0.6 mm) single crystals. Crystals were cryo-stabilized with a brief exposure to 15 % PEG3350, 15 % Ethylene Glycol, 250 mM  $(\text{NH}_4)_2\text{SO}_4$ , 100 mM imidazole, 10 mM  $\text{CdCl}_2$ , pH 7.5, and were flash frozen in liquid nitrogen. Data were collected at CHESS beamline A1, using an ADSC Quantum-210 CCD detector, and were processed using HKL2000 (See, Otwinowski, Z., and Minor, W. (1997). Processing of X-ray Diffraction Data Collected in Oscillation Mode. In *Macromolecular Crystallography*, Volume 276, C.W. Carter Jr. and R.M. Sweet, eds. (New York: Academic Press), pp. 307-326.

[0095] **Structure determination and refinement.** Search models for molecular replacement were derived from the coordinates of tethered sEGFR (pdb id. 1NQL; Ferguson, K.M. et al., 2003) and those of the structure of the Fab fragment alone (P. Jeffrey and P. Kussie unpublished data). An initial solution was found for a domain I/II fragment (amino acids 5 – 240) combined with a domain III fragment of sEGFR using the dyad option of MOLREP (The CCP4 Suite: Programs for Protein Crystallography. *Acta Cryst. D50*, 760-763 (1990)) to search for the best relative orientation of these two fragments. With the solution for these fragments fixed it was possible to find a solution for the Fab fragment. Rigid body refinement with CNS was used to optimize the orientation of the individual sub-domains of the Fab. Following several rounds of model building using 'O' (Jones, T.A. et al., 1991, *Acta Crystallogr A* 47 (*Pt* 2), 110-119) and refinement using CNS (Brunger, A.T. et al., 1998, *Acta Crystallogr D Biol Crystallogr* 54 (*Pt* 5), 905-921), interpretable density for the remaining portions of sEGFR (C-terminal part of domain II and domain IV) could be seen in composite simulated-annealing omit-maps (calculated with CNS). The final stages of refinement employed TLS refinement (Winn, M.D. et al., 2001, *Acta Crystallogr D Biol Crystallogr* 57, 122-133) with anisotropic motion tensors refined for each of the four domains of sEGFR and each of the domains of the

Fab, using REFMAC5 (The CCP4 Suite: Programs for Protein Crystallography. Acta Cryst. D50, 760-763 (1990).

[0096] **BIAcore binding studies.** Surface plasmon resonance binding experiments, performed using a BIAcore 3000 instrument, were performed in 10mM Hepes buffer, pH 8.0, that contained 150mM NaCl, 3mM EDTA, and 0.005% Tween 20 (HBS-EP8) at 25°C. EGF-agonists (200 µg/ml) were coupled to a CM5 BIAcore sensor chip using standard amine coupling. Optimal coupling was obtained in 10 mM sodium acetate at pH 4.0 for EGF and TGF $\alpha$  and at pH 6.0 for HB-EGF. Binding of sEGFR to these immobilized ligands was performed and analyzed exactly as described in Ferguson, K.M. et al., 2000 (Figure 4c). The Fab fragment of cetuximab was coupled to a separate sensor chip using amine coupling. The Fab was diluted to 50 µg/ml in 10 mM sodium acetate at pH 5.5 and passed over the activated surface for 5 minute at a flow rate 10 µl/minute. The binding of sEGFR to this surface was determined exactly as for sEGFR binding to immobilized EGF (Ferguson, K.M. et al., 2000 ) with the following modifications; a long contact time was used (10 µl/min for 20 minutes; 200 µl injection) to ensure that equilibrium was reached in binding of sEGFR to the surface even at low concentration, the surface was regenerated between data points with two 5 µl injections of 10 mM glycine, 1M NaCl (pH 3.0) to rapidly remove residual bound sEGFR. This regeneration does not impair the binding of sEGFR to the Fab; the observed response for a control sEGFR sample is constant over multiple cycles of binding and regeneration (Figure 4(a)).

[0097] The effect of added Fab upon the binding of sEGFR to immobilized ligand was determined using the same EGF-agonist chip described above. A series of samples were prepared that contained 600 nM sEGFR and increasing amounts of Fab. The fraction of the maximal response in the absence of added Fab is plotted for each ligand (Figure 4(b)).

[0098] **EGFR:Cetuximab Fab Interface.** The following amino acids are involved in direct hydrogen bonds with the Fab (3.25 Å cut-off, calculated using the program CONTACT (CCP4)):



sEGFR	Cetuximab* Light Chain	Cetuximab* Heavy Chain	Type
Ser 468	Asn 91		Main chain – main chain
Asn 469	Trp 94		Main chain – main chain
Arg 353		Gly 54	Side chain – main chain
Gln 384		Tyr 102	Side chain – side chain
Gln 408		Tyr 102	Side chain – side chain
Ser 418		Trp 52	Side chain – side chain
Ser 440		Tyr 102	Side chain – main chain
Lys 465		Asp 103	Side chain – side chain

\*amino acids in the Fab are numbered in a simple sequential manner.

Additional amino acids that are close (4 Å cut-off) are shown on the following sequence.

```

310      320      330      340      350      360
B1 RKVCNGIGIG EFKDSLSINA TNIKHFKNCT SISGDLHILP VAFRGDSFTH TPPLDPQELD

370      380      390      400      410      420
ILKTVKEITG FLLIQAWPEN RTDLHAFENL EIIRGRTKQH GQFSLAVVSL NITSLGLRSL

430      440      450      460      470
KEISDGDVII SGNKNLCYAN TINWKKLFGT SGQKTKIISN RGENSCKA

```

**Bold** Fab Heavy chain  
**Underlined and Italic** Fab Light chain  
**Italic** Both chains of Fab

The binding site for cetuximab Fab is partially over-lapping with the ligand binding site. The following amino acids are involved in contact to TGF $\alpha$  or EGF, as reported by Garrett *et al.* and Ogiso *et al.*

```

310      320      330      340      350      360
B1 RKVCNGIGIG EFKDSLSINA TNIKHFKNCT SISGDLHILP VAFRGDSFTH TPPLDPQELD

370      380      390      400      410      420
ILKTVKEITG FLLIQAWPEN RTDLHAFENL EIIRGRTKQH GQFSLAVVSL NITSLGLRSL

430      440      450      460      470
KEISDGDVII SGNKNLCYAN TINWKKLFGT SGQKTKIISN RGENSCKA

```

**Underlined** EGF/TGF $\alpha$

Table 1. Data collection and refinement statistics

<b><u>Data Collection Statistics<sup>a</sup></u></b>	
Space group	P2 <sub>1</sub>
Unique cell dimensions	a = 77.8 Å, b = 70.9 Å, c = 147.1 Å; β = 102.5°
X-ray source	CHESS A1
Resolution limit	2.8Å
Observed/unique	1411,255/38,478
Completeness	99.8 (90.6)
R <sub>sym</sub> <sup>b</sup>	0.03 (0.33)
<I/σ>	17 (5.6)
<b><u>Refinement Statistics</u></b>	
Resolution limits	500-2.8Å
No. of reflections/no. test set	38098/1900
R factor (R <sub>free</sub> ) <sup>c</sup>	0.22 (0.27)
<b><u>Model</u></b>	
Protein	sEGFR - aa 1-614 Fab: Light chain; aa 1-211, Heavy Chain; aa 1-220, 25 saccharide units
Total number of atoms	8131
RMSD bond lengths (Å)	0.028 Å
RMSD bond angles (°)	2.63°
a	Numbers in parentheses refer to last resolution shell
b	R <sub>sym</sub> = Σ I <sub>h</sub> - <I <sub>h</sub> >  / ΣI <sub>h</sub> , where <I <sub>h</sub> > = average intensity over symmetry equivalent measurements
c	R factor = Σ F <sub>o</sub> - F <sub>c</sub>   / ΣF <sub>o</sub> , where summation is over data used in the refinement; R <sub>free</sub> includes only 5% of the data excluded from the refinement

Table 2:

```

HEADER      HORMONE/GROWTH FACTOR RECEPTOR
TITLE       STRUCTURE OF THE EXTRACELLULAR DOMAIN OF HUMAN EPIDERMAL
TITLE       2 GROWTH FACTOR (EGF) RECEPTOR IN AN COMPLEX WITH IMC-C225
TITLE       3 (CETUXIMBA/ERBITUX) .
COMPND      MOL_ID: 1;
COMPND      2 MOLECULE: EPIDERMAL GROWTH FACTOR RECEPTOR;
COMPND      3 CHAIN: A;
COMPND      4 FRAGMENT: EXTRACELLULAR DOMAIN;
COMPND      5 ENGINEERED: YES;
COMPND      6 MOL_ID: 2;
COMPND      7 MOLECULE: FAB FRAGMENT FROM CETUXIMAB;
COMPND      8 CHAIN: C;
COMPND      9 CHAIN: D;
COMPND      10 SYNONYM: IMC-C225, ERBITUX;
COMPND      11 ENGINEERED: YES
SOURCE      MOL_ID: 1;
SOURCE      2 ORGANISM_SCIENTIFIC: HOMO SAPIENS;
SOURCE      3 ORGANISM_COMMON: HUMAN;
SOURCE      4 EXPRESSION_SYSTEM: SPODOPTERA FRUGIPERDA;
SOURCE      5 EXPRESSION_SYSTEM_COMMON: FALL ARMYWORM;
SOURCE      6 EXPRESSION_SYSTEM_STRAIN: VIRUS;
SOURCE      7 EXPRESSION_SYSTEM_VECTOR_TYPE: BACULOVIRUS;
SOURCE      8 MOL_ID: 2;
SOURCE      PROVIDED BY IMCLONE INC. AS FAB FRAGMENT
EXPDTA      X-RAY DIFFRACTION
REMARK      1
REMARK      2 RESOLUTION. 2.80 ANGSTROMS.
REMARK      3 REFINEMENT.
REMARK      3   PROGRAM       : REFMAC 5.1.24
REMARK      3   AUTHORS        : MURSHUDOV,VAGIN,DODSON
REMARK      3
REMARK      3   REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK      3
REMARK      3 DATA USED IN REFINEMENT.
REMARK      3 RESOLUTION RANGE HIGH (ANGSTROMS) : 2.81
REMARK      3 RESOLUTION RANGE LOW (ANGSTROMS) : 50.00
REMARK      3 DATA CUTOFF (SIGMA(F)) : NONE
REMARK      3 COMPLETENESS FOR RANGE (%) : 99.44
REMARK      3 NUMBER OF REFLECTIONS : 36547
REMARK      3
REMARK      3 FIT TO DATA USED IN REFINEMENT.
REMARK      3 CROSS-VALIDATION METHOD : THROUGHOUT
REMARK      3 FREE R VALUE TEST SET SELECTION : RANDOM
REMARK      3 R VALUE (WORKING + TEST SET) : 0.22623
REMARK      3 R VALUE (WORKING SET) : 0.22396
REMARK      3 FREE R VALUE : 0.26877
REMARK      3 FREE R VALUE TEST SET SIZE (%) : 5.0
REMARK      3 FREE R VALUE TEST SET COUNT : 1931
REMARK      3
REMARK      3 FIT IN THE HIGHEST RESOLUTION BIN.
REMARK      3 TOTAL NUMBER OF BINS USED : 20
REMARK      3 BIN RESOLUTION RANGE HIGH : 2.805
REMARK      3 BIN RESOLUTION RANGE LOW : 2.878
REMARK      3 REFLECTION IN BIN (WORKING SET) : 2605
REMARK      3 BIN R VALUE (WORKING SET) : 0.335
REMARK      3 BIN FREE R VALUE SET COUNT : 141
REMARK      3 BIN FREE R VALUE : 0.381
REMARK      3
REMARK      3 NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK      3 ALL ATOMS : 8131
REMARK      3
REMARK      3 B VALUES.
REMARK      3 FROM WILSON PLOT (A**2) : NULL
REMARK      3 MEAN B VALUE (OVERALL, A**2) : 7.403
REMARK      3 OVERALL ANISOTROPIC B VALUE.

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REMARK 3 B11 (A**2) : 1.07
REMARK 3 B22 (A**2) : 0.32
REMARK 3 B33 (A**2) : -1.83
REMARK 3 B12 (A**2) : 0.00
REMARK 3 B13 (A**2) : -1.01
REMARK 3 B23 (A**2) : 0.00
REMARK 3
REMARK 3 ESTIMATED OVERALL COORDINATE ERROR.
REMARK 3 ESU BASED ON R VALUE (A): 0.910
REMARK 3 ESU BASED ON FREE R VALUE (A): 0.362
REMARK 3 ESU BASED ON MAXIMUM LIKELIHOOD (A): 0.295
REMARK 3 ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2): 15.477
REMARK 3
REMARK 3 CORRELATION COEFFICIENTS.
REMARK 3 CORRELATION COEFFICIENT FO-FC : 0.925
REMARK 3 CORRELATION COEFFICIENT FO-FC FREE : 0.888
REMARK 3
REMARK 3 RMS DEVIATIONS FROM IDEAL VALUES COUNT RMS WEIGHT
REMARK 3 BOND LENGTHS REFINED ATOMS (A): 8349 ; 0.028 ; 0.021
REMARK 3 BOND LENGTHS OTHERS (A): 7109 ; 0.002 ; 0.020
REMARK 3 BOND ANGLES REFINED ATOMS (DEGREES): 11411 ; 2.623 ; 1.993
REMARK 3 BOND ANGLES OTHERS (DEGREES): 16529 ; 1.130 ; 3.000
REMARK 3 TORSION ANGLES, PERIOD 1 (DEGREES): 1042 ; 9.222 ; 5.000
REMARK 3 CHIRAL-CENTER RESTRAINTS (A**3): 1349 ; 0.132 ; 0.200
REMARK 3 GENERAL PLANES REFINED ATOMS (A): 9136 ; 0.009 ; 0.020
REMARK 3 GENERAL PLANES OTHERS (A): 1532 ; 0.007 ; 0.020
REMARK 3 NON-BONDED CONTACTS REFINED ATOMS (A): 1896 ; 0.255 ; 0.200
REMARK 3 NON-BONDED CONTACTS OTHERS (A): 8610 ; 0.250 ; 0.200
REMARK 3 NON-BONDED TORSION OTHERS (A): 5383 ; 0.106 ; 0.200
REMARK 3 H-BOND (X...Y) REFINED ATOMS (A): 146 ; 0.207 ; 0.200
REMARK 3 SYMMETRY VDW REFINED ATOMS (A): 11 ; 0.149 ; 0.200
REMARK 3 SYMMETRY VDW OTHERS (A): 51 ; 0.288 ; 0.200
REMARK 3 SYMMETRY H-BOND REFINED ATOMS (A): 3 ; 0.346 ; 0.200
REMARK 3
REMARK 3 ISOTROPIC THERMAL FACTOR RESTRAINTS. COUNT RMS WEIGHT
REMARK 3 MAIN-CHAIN BOND REFINED ATOMS (A**2): 5197 ; 0.717 ; 1.500
REMARK 3 MAIN-CHAIN ANGLE REFINED ATOMS (A**2): 8355 ; 1.289 ; 2.000
REMARK 3 SIDE-CHAIN BOND REFINED ATOMS (A**2): 3152 ; 2.076 ; 3.000
REMARK 3 SIDE-CHAIN ANGLE REFINED ATOMS (A**2): 3056 ; 3.116 ; 4.500
REMARK 3
REMARK 3 NCS RESTRAINTS STATISTICS
REMARK 3 NUMBER OF NCS GROUPS : NULL
REMARK 3
REMARK 3 BULK SOLVENT MODELLING.
REMARK 3 METHOD USED : BABINET MODEL WITH MASK
REMARK 3 PARAMETERS FOR MASK CALCULATION
REMARK 3 VDW PROBE RADIUS : 1.40
REMARK 3 ION PROBE RADIUS : 0.80
REMARK 3 SHRINKAGE RADIUS : 0.80
REMARK 3
REMARK 3 OTHER REFINEMENT REMARKS:
REMARK 3 HYDROGENS HAVE BEEN ADDED IN THE RIDING POSITIONS
REMARK 3
LINK C1 NAG E3281 1.439 ND2 ASN A 328 NAG-ASN
LINK C1 NAG E3371 1.439 ND2 ASN A 337 NAG-ASN
LINK C1 NAG E3891 1.439 ND2 ASN A 389 NAG-ASN
LINK C1 NAG E5441 1.439 ND2 ASN A 544 NAG-ASN
LINK C1 NAG E5791 1.439 ND2 ASN A 579 NAG-ASN
LINK C1 NAG E 881 1.439 ND2 ASN D 88 NAG-ASN
LINK O3 NAG E 321 N2 NAG E 322 NAG-NAG
LINK O3 NAG E 321 C7 NAG E 322 NAG-NAG1
LINK O3 NAG E 321 O7 NAG E 322 NAG-NAG2
LINK O2 MAN E 324 1.080 O2 MAN E 323 MAN-MAN
CISPEP 1 SER C 7 PRO C 8 0.00
CISPEP 2 TYR C 140 PRO C 141 0.00
CISPEP 3 PHE D 152 PRO D 153 0.00
CISPEP 4 GLU D 154 PRO D 155 0.00
LINK NAG E3281 NAG E3282 BETA1-4

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LINK		NAG E3282		MAN E3283		BETA1-4
LINK		MAN E3283		MAN E3284		BETA1-6
LINK		MAN E3284		MAN E3287		ALPHA1-3
LINK		MAN E3287		MAN E3288		BETA1-2
LINK		MAN E3283		MAN E3285		ALPHA1-3
LINK		MAN E3285		MAN E3286		BETA1-2
LINK		MAN E3284		MAN E3289		ALPHA1-6
LINK		NAG E3371		NAG E3372		ALPHA1-4
LINK		NAG E3372		MAN E3373		ALPHA1-4
LINK		MAN E3373		MAN E3374		BETA1-3
LINK		NAG E4201		NAG E4202		ALPHA1-4
LINK		NAG E4202		MAN E4203		ALPHA1-4
SSBOND	1	CYS A 34	CYS A 7			
SSBOND	2	CYS A 163	CYS A 133			
SSBOND	3	CYS A 175	CYS A 166			
SSBOND	4	CYS A 183	CYS A 170			
SSBOND	5	CYS A 207	CYS A 195			
SSBOND	6	CYS A 216	CYS A 208			
SSBOND	7	CYS A 224	CYS A 212			
SSBOND	8	CYS A 236	CYS A 227			
SSBOND	9	CYS A 283	CYS A 271			
SSBOND	10	CYS A 302	CYS A 287			
SSBOND	11	CYS A 309	CYS A 305			
SSBOND	12	CYS A 338	CYS A 313			
SSBOND	13	CYS A 499	CYS A 486			
SSBOND	14	CYS A 511	CYS A 502			
SSBOND	15	CYS A 531	CYS A 515			
SSBOND	16	CYS A 547	CYS A 534			
SSBOND	17	CYS A 555	CYS A 538			
SSBOND	18	CYS A 567	CYS A 558			
SSBOND	19	CYS A 593	CYS A 571			
SSBOND	20	CYS A 604	CYS A 596			
SSBOND	21	CYS A 612	CYS A 600			
SSBOND	22	CYS A 446	CYS A 475			
SSBOND	23	CYS A 482	CYS A 491			
SSBOND	24	CYS A 199	CYS A 191			
SSBOND	25	CYS C 88	CYS C 23			
SSBOND	26	CYS C 194	CYS C 134			
SSBOND	27	CYS D 95	CYS D 22			
SSBOND	28	CYS D 202	CYS D 146			
MODRES		NAG E 321	NAG-b-D			RENAME
MODRES		NAG E 322	NAG-b-D			RENAME
MODRES		MAN E 323	MAN-b-D			RENAME
MODRES		MAN E 324	MAN-b-D			RENAME
MODRES		NAG E 3281	NAG-b-D			RENAME
MODRES		NAG E 3282	NAG-b-D			RENAME
MODRES		MAN E 3283	MAN-b-D			RENAME
MODRES		MAN E 3284	MAN-b-D			RENAME
MODRES		MAN E 3287	MAN-a-D			RENAME
MODRES		MAN E 3288	MAN-b-D			RENAME
MODRES		MAN E 3285	MAN-a-D			RENAME
MODRES		MAN E 3286	MAN-b-D			RENAME
MODRES		MAN E 3289	MAN-a-D			RENAME
MODRES		NAG E 3371	NAG-b-D			RENAME
MODRES		NAG E 3372	NAG-a-D			RENAME
MODRES		MAN E 3373	MAN-a-D			RENAME
MODRES		MAN E 3374	MAN-b-D			RENAME
MODRES		NAG E 3891	NAG-b-D			RENAME
MODRES		NAG E 3892	NAG-b-D			RENAME
MODRES		NAG E 4201	NAG-b-D			RENAME
MODRES		NAG E 4202	NAG-a-D			RENAME
MODRES		MAN E 4203	MAN-a-D			RENAME
MODRES		NAG E 5041	NAG-b-D			RENAME
MODRES		NAG E 5441	NAG-b-D			RENAME
MODRES		NAG E 5791	NAG-b-D			RENAME
MODRES		NAG E 881	NAG-b-D			RENAME
CRYST1	77.823	70.861	147.122	90.00	102.48	90.00 P 1 21 1
SCALE1	0.012850	0.000000	0.002844		0.000000	

SCALE2	0.000000	0.014112	0.000000	0.000000	
SCALE3	0.000000	0.000000	0.006962	0.000000	
ATOM	1	N	LEU A	1	13.360 2.249 11.251 1.00100.92 N
ATOM	3	CA	LEU A	1	12.773 1.470 12.398 1.00105.53 C
ATOM	5	CB	LEU A	1	11.965 0.248 11.865 1.00108.08 C
ATOM	8	CG	LEU A	1	10.656 -0.207 12.561 1.00114.07 C
ATOM	10	CD1	LEU A	1	9.579 0.912 12.805 1.00118.27 C
ATOM	14	CD2	LEU A	1	10.023 -1.358 11.772 1.00115.39 C
ATOM	18	C	LEU A	1	13.923 1.032 13.354 1.00103.08 C
ATOM	19	O	LEU A	1	13.913 1.330 14.572 1.00105.39 O
ATOM	22	N	GLU A	2	14.904 0.333 12.772 1.00 98.75 N
ATOM	24	CA	GLU A	2	16.143 -0.038 13.449 1.00 95.06 C
ATOM	26	CB	GLU A	2	16.981 -0.917 12.518 1.00 90.85 C
ATOM	29	CG	GLU A	2	18.025 -1.714 13.253 1.00 89.57 C
ATOM	32	CD	GLU A	2	19.160 -2.205 12.358 1.00 88.28 C
ATOM	33	OE1	GLU A	2	19.720 -1.403 11.495 1.00 84.21 O
ATOM	34	OE2	GLU A	2	19.493 -3.427 12.562 1.00 89.66 O
ATOM	35	C	GLU A	2	16.965 1.207 13.819 1.00 92.58 C
ATOM	36	O	GLU A	2	17.201 2.090 12.955 1.00 90.00 O
ATOM	37	N	GLU A	3	17.396 1.261 15.096 1.00 93.29 N
ATOM	39	CA	GLU A	3	18.416 2.250 15.593 1.00 90.23 C
ATOM	41	CB	GLU A	3	18.082 2.630 17.081 1.00 94.21 C
ATOM	44	CG	GLU A	3	16.599 3.021 17.380 1.00100.00 C
ATOM	47	CD	GLU A	3	16.165 2.910 18.872 1.00105.60 C
ATOM	48	OE1	GLU A	3	16.983 2.478 19.722 1.00104.83 O
ATOM	49	OE2	GLU A	3	14.991 3.253 19.229 1.00109.98 O
ATOM	50	C	GLU A	3	19.925 1.714 15.412 1.00 84.70 C
ATOM	51	O	GLU A	3	20.405 0.936 16.274 1.00 85.80 O
ATOM	52	N	LYS A	4	20.618 2.086 14.305 1.00 79.39 N
ATOM	54	CA	LYS A	4	21.994 1.608 13.949 1.00 74.36 C
ATOM	56	CB	LYS A	4	22.472 2.211 12.626 1.00 70.99 C
ATOM	59	CG	LYS A	4	21.654 1.834 11.436 1.00 73.21 C
ATOM	62	CD	LYS A	4	22.526 1.263 10.289 1.00 71.25 C
ATOM	65	CE	LYS A	4	21.667 0.401 9.254 1.00 75.31 C
ATOM	68	NZ	LYS A	4	21.491 1.128 7.883 1.00 76.46 N
ATOM	72	C	LYS A	4	23.090 2.043 14.898 1.00 72.83 C
ATOM	73	O	LYS A	4	23.169 3.249 15.216 1.00 73.52 O
ATOM	74	N	LYS A	5	24.009 1.129 15.248 1.00 70.16 N
ATOM	76	CA	LYS A	5	24.974 1.410 16.328 1.00 68.70 C
ATOM	78	CB	LYS A	5	25.338 0.124 17.092 1.00 69.57 C
ATOM	81	CG	LYS A	5	24.052 -0.768 17.413 1.00 75.20 C
ATOM	84	CD	LYS A	5	23.641 -0.893 18.917 1.00 79.29 C
ATOM	87	CE	LYS A	5	22.196 -0.390 19.171 1.00 83.67 C
ATOM	90	NZ	LYS A	5	21.488 -1.198 20.194 1.00 91.94 N
ATOM	94	C	LYS A	5	26.206 2.153 15.828 1.00 64.30 C
ATOM	95	O	LYS A	5	26.682 1.926 14.749 1.00 61.85 O
ATOM	96	N	VAL A	6	26.724 3.047 16.647 1.00 64.34 N
ATOM	98	CA	VAL A	6	27.596 4.114 16.203 1.00 61.78 C
ATOM	100	CB	VAL A	6	26.890 5.440 16.468 1.00 63.52 C
ATOM	102	CG1	VAL A	6	27.642 6.564 15.784 1.00 61.56 C
ATOM	106	CG2	VAL A	6	25.473 5.382 15.997 1.00 66.36 C
ATOM	110	C	VAL A	6	28.801 4.255 17.058 1.00 61.00 C
ATOM	111	O	VAL A	6	28.640 4.254 18.203 1.00 63.87 O
ATOM	112	N	CYS A	7	29.982 4.525 16.546 1.00 58.45 N
ATOM	114	CA	CYS A	7	31.094 4.807 17.432 1.00 59.36 C
ATOM	116	CB	CYS A	7	31.943 3.561 17.567 1.00 57.65 C
ATOM	119	SG	CYS A	7	32.512 2.903 16.006 1.00 58.73 S
ATOM	120	C	CYS A	7	31.926 5.983 16.972 1.00 58.39 C
ATOM	121	O	CYS A	7	31.955 6.264 15.829 1.00 57.51 O
ATOM	122	N	GLN A	8	32.585 6.702 17.874 1.00 61.38 N
ATOM	124	CA	GLN A	8	33.635 7.683 17.502 1.00 61.54 C
ATOM	126	CB	GLN A	8	34.054 8.482 18.741 1.00 63.20 C
ATOM	129	CG	GLN A	8	32.927 9.373 19.254 1.00 67.39 C
ATOM	132	CD	GLN A	8	32.574 10.563 18.334 1.00 70.24 C
ATOM	133	OE1	GLN A	8	33.273 10.818 17.335 1.00 70.24 O
ATOM	134	NE2	GLN A	8	31.479 11.300 18.673 1.00 75.33 N
ATOM	137	C	GLN A	8	34.857 6.935 16.978 1.00 60.56 C
ATOM	138	O	GLN A	8	35.205 5.857 17.449 1.00 63.77 O

ATOM	139	N	GLY	A	9	35.579	7.394	16.026	1.00	58.91	N
ATOM	141	CA	GLY	A	9	36.720	6.527	15.726	1.00	57.92	C
ATOM	144	C	GLY	A	9	38.036	7.249	15.990	1.00	60.20	C
ATOM	145	O	GLY	A	9	38.259	8.517	15.590	1.00	64.00	O
ATOM	146	N	THR	A	10	38.926	6.543	16.652	1.00	59.60	N
ATOM	148	CA	THR	A	10	40.369	6.891	16.558	1.00	60.20	C
ATOM	150	CB	THR	A	10	41.078	5.669	16.340	1.00	59.09	C
ATOM	152	OG1	THR	A	10	40.256	4.658	16.885	1.00	66.90	O
ATOM	154	CG2	THR	A	10	42.281	5.634	17.296	1.00	61.60	C
ATOM	158	C	THR	A	10	40.998	7.884	15.538	1.00	57.46	C
ATOM	159	O	THR	A	10	40.657	7.865	14.372	1.00	55.26	O
ATOM	160	N	SER	A	11	41.945	8.692	16.037	1.00	57.21	N
ATOM	162	CA	SER	A	11	42.838	9.479	15.220	1.00	56.01	C
ATOM	164	CB	SER	A	11	42.438	10.930	15.303	1.00	58.10	C
ATOM	167	OG	SER	A	11	41.073	11.006	15.003	1.00	58.88	O
ATOM	169	C	SER	A	11	44.237	9.330	15.720	1.00	56.12	C
ATOM	170	O	SER	A	11	44.916	10.266	16.008	1.00	56.39	O
ATOM	171	N	ASN	A	12	44.687	8.118	15.834	1.00	55.44	N
ATOM	173	CA	ASN	A	12	46.051	7.926	16.295	1.00	58.03	C
ATOM	175	CB	ASN	A	12	46.089	6.865	17.413	1.00	58.48	C
ATOM	178	CG	ASN	A	12	44.886	6.955	18.346	1.00	59.19	C
ATOM	179	OD1	ASN	A	12	44.347	8.062	18.563	1.00	59.90	O
ATOM	180	ND2	ASN	A	12	44.426	5.784	18.880	1.00	56.12	N
ATOM	183	C	ASN	A	12	47.084	7.624	15.172	1.00	57.48	C
ATOM	184	O	ASN	A	12	48.285	7.497	15.459	1.00	60.22	O
ATOM	185	N	LYS	A	13	46.655	7.497	13.923	1.00	54.67	N
ATOM	187	CA	LYS	A	13	47.614	7.192	12.876	1.00	55.14	C
ATOM	189	CB	LYS	A	13	48.381	8.476	12.501	1.00	57.96	C
ATOM	192	CG	LYS	A	13	47.420	9.634	12.179	1.00	57.91	C
ATOM	195	CD	LYS	A	13	48.048	10.642	11.298	1.00	60.41	C
ATOM	198	CE	LYS	A	13	47.075	11.808	10.983	1.00	63.26	C
ATOM	201	NZ	LYS	A	13	47.797	13.059	10.472	1.00	67.44	N
ATOM	205	C	LYS	A	13	48.582	6.093	13.297	1.00	56.16	C
ATOM	206	O	LYS	A	13	48.171	4.995	13.766	1.00	56.29	O
ATOM	207	N	LEU	A	14	49.880	6.360	13.196	1.00	57.76	N
ATOM	209	CA	LEU	A	14	50.813	5.266	13.406	1.00	57.81	C
ATOM	211	CB	LEU	A	14	51.985	5.375	12.424	1.00	58.72	C
ATOM	214	CG	LEU	A	14	51.524	5.396	10.955	1.00	56.05	C
ATOM	216	CD1	LEU	A	14	52.683	5.353	9.975	1.00	57.66	C
ATOM	220	CD2	LEU	A	14	50.536	4.287	10.645	1.00	53.10	C
ATOM	224	C	LEU	A	14	51.243	5.154	14.855	1.00	60.01	C
ATOM	225	O	LEU	A	14	52.038	4.261	15.187	1.00	61.31	O
ATOM	226	N	THR	A	15	50.731	6.037	15.716	1.00	60.49	N
ATOM	228	CA	THR	A	15	50.925	5.854	17.142	1.00	63.51	C
ATOM	230	CB	THR	A	15	50.300	6.950	17.944	1.00	64.28	C
ATOM	232	OG1	THR	A	15	50.825	8.199	17.543	1.00	65.35	O
ATOM	234	CG2	THR	A	15	50.791	6.867	19.429	1.00	69.05	C
ATOM	238	C	THR	A	15	50.397	4.495	17.648	1.00	63.38	C
ATOM	239	O	THR	A	15	49.322	4.011	17.232	1.00	61.95	O
ATOM	240	N	GLN	A	16	51.190	3.874	18.517	1.00	66.09	N
ATOM	242	CA	GLN	A	16	50.868	2.561	19.107	1.00	66.17	C
ATOM	244	CB	GLN	A	16	52.007	1.560	18.862	1.00	67.19	C
ATOM	247	CG	GLN	A	16	51.728	0.217	19.455	1.00	66.47	C
ATOM	250	CD	GLN	A	16	52.838	-0.766	19.295	1.00	66.59	C
ATOM	251	OE1	GLN	A	16	53.535	-0.791	18.274	1.00	64.81	O
ATOM	252	NE2	GLN	A	16	52.984	-1.624	20.293	1.00	68.23	N
ATOM	255	C	GLN	A	16	50.617	2.737	20.632	1.00	69.21	C
ATOM	256	O	GLN	A	16	51.390	3.422	21.325	1.00	73.28	O
ATOM	257	N	LEU	A	17	49.533	2.144	21.148	1.00	67.72	N
ATOM	259	CA	LEU	A	17	49.033	2.455	22.486	1.00	69.49	C
ATOM	261	CB	LEU	A	17	47.504	2.620	22.478	1.00	67.31	C
ATOM	264	CG	LEU	A	17	46.923	3.591	21.437	1.00	64.82	C
ATOM	266	CD1	LEU	A	17	45.375	3.565	21.397	1.00	62.29	C
ATOM	270	CD2	LEU	A	17	47.487	5.032	21.639	1.00	66.62	C
ATOM	274	C	LEU	A	17	49.450	1.295	23.363	1.00	71.74	C
ATOM	275	O	LEU	A	17	48.609	0.497	23.794	1.00	71.04	O
ATOM	276	N	GLY	A	18	50.764	1.193	23.572	1.00	73.66	N
ATOM	278	CA	GLY	A	18	51.329	0.265	24.520	1.00	76.87	C

ATOM	281	C	GLY	A	18	51.609	-1.038	23.830	1.00	75.65	C
ATOM	282	O	GLY	A	18	51.968	-1.022	22.636	1.00	72.82	O
ATOM	283	N	THR	A	19	51.451	-2.140	24.593	1.00	77.55	N
ATOM	285	CA	THR	A	19	51.581	-3.516	24.099	1.00	76.35	C
ATOM	287	CB	THR	A	19	51.171	-4.562	25.154	1.00	79.33	C
ATOM	289	OG1	THR	A	19	51.943	-4.422	26.343	1.00	83.29	O
ATOM	291	CG2	THR	A	19	51.574	-5.993	24.734	1.00	82.13	C
ATOM	295	C	THR	A	19	50.703	-3.715	22.916	1.00	71.66	C
ATOM	296	O	THR	A	19	49.617	-3.221	22.854	1.00	69.09	O
ATOM	297	N	PHE	A	20	51.211	-4.445	21.952	1.00	71.13	N
ATOM	299	CA	PHE	A	20	50.404	-4.916	20.873	1.00	68.02	C
ATOM	301	CB	PHE	A	20	51.089	-6.099	20.219	1.00	69.47	C
ATOM	304	CG	PHE	A	20	52.300	-5.752	19.353	1.00	70.89	C
ATOM	305	CD1	PHE	A	20	53.413	-6.599	19.350	1.00	74.82	C
ATOM	307	CE1	PHE	A	20	54.500	-6.334	18.562	1.00	76.46	C
ATOM	309	CZ	PHE	A	20	54.491	-5.207	17.726	1.00	74.93	C
ATOM	311	CE2	PHE	A	20	53.391	-4.360	17.707	1.00	69.96	C
ATOM	313	CD2	PHE	A	20	52.303	-4.641	18.517	1.00	69.30	C
ATOM	315	C	PHE	A	20	49.083	-5.409	21.417	1.00	67.44	C
ATOM	316	O	PHE	A	20	48.034	-5.063	20.903	1.00	63.96	O
ATOM	317	N	GLU	A	21	49.124	-6.245	22.449	1.00	71.20	N
ATOM	319	CA	GLU	A	21	47.872	-6.628	23.125	1.00	71.94	C
ATOM	321	CB	GLU	A	21	48.020	-7.643	24.239	1.00	75.53	C
ATOM	324	CG	GLU	A	21	46.614	-8.017	24.681	1.00	77.19	C
ATOM	327	CD	GLU	A	21	46.443	-9.456	25.095	1.00	84.24	C
ATOM	328	OE1	GLU	A	21	46.760	-9.761	26.300	1.00	86.94	O
ATOM	329	OE2	GLU	A	21	45.962	-10.251	24.217	1.00	85.07	O
ATOM	330	C	GLU	A	21	47.004	-5.473	23.632	1.00	71.25	C
ATOM	331	O	GLU	A	21	45.855	-5.383	23.189	1.00	69.23	O
ATOM	332	N	ASP	A	22	47.496	-4.605	24.525	1.00	73.11	N
ATOM	334	CA	ASP	A	22	46.671	-3.422	24.914	1.00	72.68	C
ATOM	336	CB	ASP	A	22	47.456	-2.386	25.699	1.00	75.14	C
ATOM	339	CG	ASP	A	22	48.062	-2.919	26.931	1.00	79.93	C
ATOM	340	OD1	ASP	A	22	47.490	-3.833	27.552	1.00	82.29	O
ATOM	341	OD2	ASP	A	22	49.142	-2.460	27.345	1.00	83.24	O
ATOM	342	C	ASP	A	22	46.054	-2.652	23.717	1.00	68.07	C
ATOM	343	O	ASP	A	22	44.945	-2.133	23.790	1.00	67.64	O
ATOM	344	N	HIS	A	23	46.807	-2.553	22.638	1.00	65.04	N
ATOM	346	CA	HIS	A	23	46.409	-1.772	21.532	1.00	61.33	C
ATOM	348	CB	HIS	A	23	47.586	-1.723	20.576	1.00	60.16	C
ATOM	351	CG	HIS	A	23	47.430	-0.802	19.398	1.00	57.41	C
ATOM	352	ND1	HIS	A	23	47.673	0.552	19.463	1.00	58.45	N
ATOM	354	CE1	HIS	A	23	47.519	1.098	18.275	1.00	53.82	C
ATOM	356	NE2	HIS	A	23	47.197	0.141	17.433	1.00	55.61	N
ATOM	358	CD2	HIS	A	23	47.171	-1.062	18.100	1.00	54.92	C
ATOM	360	C	HIS	A	23	45.178	-2.497	21.012	1.00	59.61	C
ATOM	361	O	HIS	A	23	44.118	-1.917	20.865	1.00	59.40	O
ATOM	362	N	PHE	A	24	45.286	-3.789	20.800	1.00	59.94	N
ATOM	364	CA	PHE	A	24	44.165	-4.543	20.272	1.00	58.09	C
ATOM	366	CB	PHE	A	24	44.597	-5.974	19.965	1.00	58.40	C
ATOM	369	CG	PHE	A	24	43.471	-6.884	19.627	1.00	56.74	C
ATOM	370	CD1	PHE	A	24	43.023	-6.988	18.340	1.00	54.72	C
ATOM	372	CE1	PHE	A	24	41.961	-7.863	18.065	1.00	55.93	C
ATOM	374	CZ	PHE	A	24	41.358	-8.614	19.113	1.00	55.91	C
ATOM	376	CE2	PHE	A	24	41.803	-8.486	20.339	1.00	56.90	C
ATOM	378	CD2	PHE	A	24	42.844	-7.634	20.609	1.00	56.82	C
ATOM	380	C	PHE	A	24	42.939	-4.503	21.203	1.00	59.52	C
ATOM	381	O	PHE	A	24	41.843	-4.307	20.754	1.00	58.02	O
ATOM	382	N	LEU	A	25	43.108	-4.645	22.501	1.00	63.07	N
ATOM	384	CA	LEU	A	25	41.933	-4.666	23.381	1.00	65.30	C
ATOM	386	CB	LEU	A	25	42.314	-4.821	24.840	1.00	68.45	C
ATOM	389	CG	LEU	A	25	43.082	-6.114	25.072	1.00	72.33	C
ATOM	391	CD1	LEU	A	25	43.607	-6.190	26.513	1.00	78.48	C
ATOM	395	CD2	LEU	A	25	42.279	-7.433	24.705	1.00	72.81	C
ATOM	399	C	LEU	A	25	41.117	-3.401	23.190	1.00	64.01	C
ATOM	400	O	LEU	A	25	39.876	-3.424	23.279	1.00	63.70	O
ATOM	401	N	SER	A	26	41.826	-2.309	22.885	1.00	63.31	N
ATOM	403	CA	SER	A	26	41.237	-0.975	22.871	1.00	63.14	C



ATOM	405	CB	SER	A	26	42.233	0.064	23.416	1.00	64.86	C
ATOM	408	OG	SER	A	26	42.684	0.916	22.406	1.00	65.68	O
ATOM	410	C	SER	A	26	40.693	-0.634	21.502	1.00	59.23	C
ATOM	411	O	SER	A	26	39.666	0.067	21.392	1.00	58.89	O
ATOM	412	N	LEU	A	27	41.375	-1.155	20.478	1.00	56.73	N
ATOM	414	CA	LEU	A	27	40.789	-1.286	19.177	1.00	53.81	C
ATOM	416	CB	LEU	A	27	41.575	-2.211	18.289	1.00	52.35	C
ATOM	419	CG	LEU	A	27	41.132	-2.136	16.819	1.00	49.44	C
ATOM	421	CD1	LEU	A	27	41.376	-0.797	16.298	1.00	46.75	C
ATOM	425	CD2	LEU	A	27	41.881	-3.150	15.889	1.00	49.11	C
ATOM	429	C	LEU	A	27	39.461	-1.911	19.358	1.00	54.56	C
ATOM	430	O	LEU	A	27	38.466	-1.407	18.837	1.00	55.41	O
ATOM	431	N	GLN	A	28	39.456	-3.009	20.096	1.00	55.62	N
ATOM	433	CA	GLN	A	28	38.281	-3.800	20.297	1.00	56.39	C
ATOM	435	CB	GLN	A	28	38.618	-5.091	21.063	1.00	59.09	C
ATOM	438	CG	GLN	A	28	37.773	-6.291	20.641	1.00	60.00	C
ATOM	441	CD	GLN	A	28	38.007	-7.567	21.488	1.00	64.33	C
ATOM	442	OE1	GLN	A	28	38.723	-7.563	22.480	1.00	64.48	O
ATOM	443	NE2	GLN	A	28	37.405	-8.649	21.059	1.00	65.54	N
ATOM	446	C	GLN	A	28	37.210	-3.034	21.026	1.00	57.59	C
ATOM	447	O	GLN	A	28	36.029	-3.157	20.656	1.00	57.19	O
ATOM	448	N	ARG	A	29	37.594	-2.271	22.063	1.00	59.69	N
ATOM	450	CA	ARG	A	29	36.584	-1.653	22.971	1.00	62.22	C
ATOM	452	CB	ARG	A	29	37.133	-1.079	24.311	1.00	64.71	C
ATOM	461	C	ARG	A	29	35.845	-0.627	22.145	1.00	60.09	C
ATOM	462	O	ARG	A	29	34.649	-0.509	22.287	1.00	61.92	O
ATOM	463	N	MET	A	30	36.547	0.031	21.226	1.00	57.09	N
ATOM	465	CA	MET	A	30	35.975	1.057	20.390	1.00	55.26	C
ATOM	467	CB	MET	A	30	37.106	1.794	19.716	1.00	53.16	C
ATOM	470	CG	MET	A	30	36.722	2.870	18.699	1.00	51.84	C
ATOM	473	SD	MET	A	30	35.550	4.071	19.326	1.00	54.54	S
ATOM	474	CE	MET	A	30	36.573	5.055	20.420	1.00	55.60	C
ATOM	478	C	MET	A	30	35.059	0.480	19.332	1.00	53.92	C
ATOM	479	O	MET	A	30	33.907	0.863	19.200	1.00	55.74	O
ATOM	480	N	PHE	A	31	35.550	-0.468	18.559	1.00	52.04	N
ATOM	482	CA	PHE	A	31	34.781	-0.943	17.430	1.00	49.68	C
ATOM	484	CB	PHE	A	31	35.756	-1.193	16.273	1.00	47.66	C
ATOM	487	CG	PHE	A	31	36.433	0.085	15.783	1.00	46.71	C
ATOM	488	CD1	PHE	A	31	37.781	0.305	15.979	1.00	46.45	C
ATOM	490	CE1	PHE	A	31	38.321	1.541	15.566	1.00	47.62	C
ATOM	492	CZ	PHE	A	31	37.509	2.502	14.959	1.00	44.30	C
ATOM	494	CE2	PHE	A	31	36.194	2.278	14.788	1.00	42.28	C
ATOM	496	CD2	PHE	A	31	35.663	1.104	15.190	1.00	44.72	C
ATOM	498	C	PHE	A	31	33.789	-2.089	17.673	1.00	50.47	C
ATOM	499	O	PHE	A	31	33.081	-2.417	16.777	1.00	48.38	O
ATOM	500	N	ASN	A	32	33.613	-2.585	18.890	1.00	53.44	N
ATOM	502	CA	ASN	A	32	32.885	-3.794	19.024	1.00	56.24	C
ATOM	504	CB	ASN	A	32	32.747	-4.260	20.430	1.00	59.73	C
ATOM	507	CG	ASN	A	32	32.163	-5.711	20.520	1.00	62.37	C
ATOM	508	OD1	ASN	A	32	32.440	-6.605	19.743	1.00	58.57	O
ATOM	509	ND2	ASN	A	32	31.353	-5.911	21.504	1.00	72.53	N
ATOM	512	C	ASN	A	32	31.558	-3.958	18.295	1.00	58.05	C
ATOM	513	O	ASN	A	32	31.416	-4.866	17.436	1.00	59.26	O
ATOM	514	N	ASN	A	33	30.525	-3.217	18.586	1.00	60.46	N
ATOM	516	CA	ASN	A	33	29.286	-3.562	17.838	1.00	61.41	C
ATOM	518	CB	ASN	A	33	28.089	-3.573	18.789	1.00	65.21	C
ATOM	521	CG	ASN	A	33	28.127	-4.776	19.664	1.00	67.90	C
ATOM	522	OD1	ASN	A	33	28.491	-5.890	19.232	1.00	63.09	O
ATOM	523	ND2	ASN	A	33	27.793	-4.578	20.898	1.00	73.36	N
ATOM	526	C	ASN	A	33	29.053	-2.692	16.659	1.00	59.01	C
ATOM	527	O	ASN	A	33	27.930	-2.561	16.195	1.00	60.95	O
ATOM	528	N	CYS	A	34	30.114	-2.094	16.167	1.00	55.98	N
ATOM	530	CA	CYS	A	34	29.963	-0.850	15.449	1.00	55.77	C
ATOM	532	CB	CYS	A	34	31.281	-0.106	15.502	1.00	54.43	C
ATOM	535	SG	CYS	A	34	31.232	1.564	14.851	1.00	57.88	S
ATOM	536	C	CYS	A	34	29.476	-0.995	13.995	1.00	54.12	C
ATOM	537	O	CYS	A	34	30.046	-1.728	13.154	1.00	52.55	O
ATOM	538	N	GLU	A	35	28.408	-0.279	13.701	1.00	54.92	N

ATOM	540	CA	GLU	A	35	27.854	-0.268	12.353	1.00	54.01	C
ATOM	542	CB	GLU	A	35	26.296	-0.439	12.423	1.00	57.63	C
ATOM	545	CG	GLU	A	35	25.807	-1.904	12.595	1.00	60.04	C
ATOM	548	CD	GLU	A	35	24.265	-2.089	12.755	1.00	66.48	C
ATOM	549	OE1	GLU	A	35	23.430	-1.283	12.291	1.00	69.81	O
ATOM	550	OE2	GLU	A	35	23.846	-3.086	13.360	1.00	69.46	O
ATOM	551	C	GLU	A	35	28.366	0.985	11.531	1.00	50.84	C
ATOM	552	O	GLU	A	35	28.835	0.861	10.394	1.00	47.39	O
ATOM	553	N	VAL	A	36	28.298	2.154	12.164	1.00	51.35	N
ATOM	555	CA	VAL	A	36	28.759	3.440	11.634	1.00	49.75	C
ATOM	557	CB	VAL	A	36	27.613	4.468	11.651	1.00	52.18	C
ATOM	559	CG1	VAL	A	36	28.075	5.785	11.084	1.00	50.62	C
ATOM	563	CG2	VAL	A	36	26.441	3.964	10.857	1.00	53.96	C
ATOM	567	C	VAL	A	36	29.898	4.062	12.454	1.00	48.86	C
ATOM	568	O	VAL	A	36	29.810	4.215	13.664	1.00	50.58	O
ATOM	569	N	VAL	A	37	30.955	4.440	11.786	1.00	46.36	N
ATOM	571	CA	VAL	A	37	32.030	5.169	12.417	1.00	46.84	C
ATOM	573	CB	VAL	A	37	33.361	4.637	11.878	1.00	44.64	C
ATOM	575	CG1	VAL	A	37	34.537	5.214	12.638	1.00	45.69	C
ATOM	579	CG2	VAL	A	37	33.372	3.171	11.950	1.00	43.09	C
ATOM	583	C	VAL	A	37	31.876	6.682	12.091	1.00	47.84	C
ATOM	584	O	VAL	A	37	32.128	7.150	10.959	1.00	47.48	O
ATOM	585	N	LEU	A	38	31.406	7.446	13.057	1.00	49.78	N
ATOM	587	CA	LEU	A	38	31.412	8.917	12.977	1.00	50.77	C
ATOM	589	CB	LEU	A	38	31.068	9.494	14.341	1.00	53.03	C
ATOM	592	CG	LEU	A	38	29.739	9.093	14.919	1.00	54.79	C
ATOM	594	CD1	LEU	A	38	29.401	10.042	16.017	1.00	57.99	C
ATOM	598	CD2	LEU	A	38	28.708	9.110	13.851	1.00	54.29	C
ATOM	602	C	LEU	A	38	32.752	9.540	12.550	1.00	49.42	C
ATOM	603	O	LEU	A	38	32.748	10.523	11.843	1.00	50.78	O
ATOM	604	N	GLY	A	39	33.862	8.991	13.049	1.00	48.45	N
ATOM	606	CA	GLY	A	39	35.219	9.454	12.840	1.00	47.35	C
ATOM	609	C	GLY	A	39	35.961	8.563	11.878	1.00	45.06	C
ATOM	610	O	GLY	A	39	35.409	8.141	10.867	1.00	45.58	O
ATOM	611	N	ASN	A	40	37.225	8.286	12.136	1.00	44.47	N
ATOM	613	CA	ASN	A	40	37.921	7.385	11.256	1.00	42.80	C
ATOM	615	CB	ASN	A	40	39.282	7.891	10.781	1.00	43.45	C
ATOM	618	CG	ASN	A	40	39.429	9.389	10.797	1.00	44.32	C
ATOM	619	OD1	ASN	A	40	38.929	10.062	9.935	1.00	45.99	O
ATOM	620	ND2	ASN	A	40	40.205	9.897	11.734	1.00	44.54	N
ATOM	623	C	ASN	A	40	38.159	6.049	11.918	1.00	42.57	C
ATOM	624	O	ASN	A	40	38.211	5.931	13.148	1.00	44.09	O
ATOM	625	N	LEU	A	41	38.390	5.082	11.046	1.00	40.76	N
ATOM	627	CA	LEU	A	41	38.610	3.727	11.369	1.00	40.75	C
ATOM	629	CB	LEU	A	41	37.822	2.850	10.400	1.00	39.36	C
ATOM	632	CG	LEU	A	41	38.090	1.346	10.561	1.00	40.49	C
ATOM	634	CD1	LEU	A	41	37.763	0.779	11.990	1.00	44.00	C
ATOM	638	CD2	LEU	A	41	37.247	0.567	9.646	1.00	41.86	C
ATOM	642	C	LEU	A	41	40.058	3.488	11.150	1.00	40.97	C
ATOM	643	O	LEU	A	41	40.525	3.672	10.045	1.00	41.21	O
ATOM	644	N	GLU	A	42	40.785	3.046	12.166	1.00	42.33	N
ATOM	646	CA	GLU	A	42	42.201	2.775	12.003	1.00	42.70	C
ATOM	648	CB	GLU	A	42	43.020	3.721	12.808	1.00	44.36	C
ATOM	651	CG	GLU	A	42	42.695	5.159	12.455	1.00	47.91	C
ATOM	654	CD	GLU	A	42	43.418	6.201	13.308	1.00	51.77	C
ATOM	655	OE1	GLU	A	42	43.332	6.066	14.581	1.00	51.29	O
ATOM	656	OE2	GLU	A	42	44.027	7.154	12.688	1.00	51.12	O
ATOM	657	C	GLU	A	42	42.486	1.426	12.488	1.00	43.28	C
ATOM	658	O	GLU	A	42	42.282	1.164	13.667	1.00	45.62	O
ATOM	659	N	ILE	A	43	42.979	0.557	11.605	1.00	42.12	N
ATOM	661	CA	ILE	A	43	43.421	-0.746	12.046	1.00	42.21	C
ATOM	663	CB	ILE	A	43	42.633	-1.771	11.341	1.00	40.74	C
ATOM	665	CG1	ILE	A	43	41.166	-1.548	11.668	1.00	39.80	C
ATOM	668	CD1	ILE	A	43	40.301	-1.940	10.641	1.00	39.39	C
ATOM	672	CG2	ILE	A	43	43.052	-3.107	11.840	1.00	43.58	C
ATOM	676	C	ILE	A	43	44.919	-0.912	11.876	1.00	42.70	C
ATOM	677	O	ILE	A	43	45.477	-0.694	10.858	1.00	42.81	O
ATOM	678	N	THR	A	44	45.555	-1.355	12.916	1.00	44.98	N

ATOM	680	CA	THR	A	44	46.888	-0.922	13.235	1.00	46.86	C
ATOM	682	CB	THR	A	44	46.703	0.473	13.748	1.00	47.31	C
ATOM	684	OG1	THR	A	44	46.847	1.369	12.637	1.00	48.62	O
ATOM	686	CG2	THR	A	44	47.744	0.877	14.643	1.00	49.36	C
ATOM	690	C	THR	A	44	47.609	-1.798	14.277	1.00	49.13	C
ATOM	691	O	THR	A	44	47.102	-2.055	15.380	1.00	49.25	O
ATOM	692	N	TYR	A	45	48.794	-2.258	13.899	1.00	50.28	N
ATOM	694	CA	TYR	A	45	49.613	-3.069	14.773	1.00	52.93	C
ATOM	696	CB	TYR	A	45	50.095	-2.247	15.992	1.00	55.11	C
ATOM	699	CG	TYR	A	45	50.992	-1.106	15.593	1.00	55.23	C
ATOM	700	CD1	TYR	A	45	50.530	0.165	15.617	1.00	54.89	C
ATOM	702	CE1	TYR	A	45	51.299	1.209	15.259	1.00	54.93	C
ATOM	704	CZ	TYR	A	45	52.553	0.999	14.808	1.00	56.32	C
ATOM	705	OH	TYR	A	45	53.273	2.109	14.459	1.00	62.09	O
ATOM	707	CE2	TYR	A	45	53.066	-0.250	14.754	1.00	56.10	C
ATOM	709	CD2	TYR	A	45	52.279	-1.306	15.143	1.00	56.61	C
ATOM	711	C	TYR	A	45	48.946	-4.393	15.189	1.00	53.13	C
ATOM	712	O	TYR	A	45	49.477	-5.102	16.030	1.00	56.05	O
ATOM	713	N	VAL	A	46	47.843	-4.775	14.559	1.00	50.80	N
ATOM	715	CA	VAL	A	46	47.215	-6.039	14.908	1.00	51.76	C
ATOM	717	CB	VAL	A	46	45.861	-6.206	14.238	1.00	49.39	C
ATOM	719	CG1	VAL	A	46	45.204	-7.480	14.608	1.00	50.02	C
ATOM	723	CG2	VAL	A	46	44.963	-5.087	14.699	1.00	51.23	C
ATOM	727	C	VAL	A	46	48.118	-7.153	14.509	1.00	53.22	C
ATOM	728	O	VAL	A	46	48.496	-7.203	13.361	1.00	53.23	O
ATOM	729	N	GLN	A	47	48.430	-8.050	15.436	1.00	56.14	N
ATOM	731	CA	GLN	A	47	49.344	-9.151	15.162	1.00	59.49	C
ATOM	733	CB	GLN	A	47	50.283	-9.340	16.373	1.00	63.39	C
ATOM	736	CG	GLN	A	47	51.212	-8.130	16.701	1.00	64.49	C
ATOM	739	CD	GLN	A	47	52.252	-7.834	15.592	1.00	64.62	C
ATOM	740	OE1	GLN	A	47	52.947	-8.741	15.096	1.00	64.30	O
ATOM	741	NE2	GLN	A	47	52.335	-6.564	15.191	1.00	65.38	N
ATOM	744	C	GLN	A	47	48.684	-10.517	14.730	1.00	60.25	C
ATOM	745	O	GLN	A	47	47.461	-10.670	14.710	1.00	59.39	O
ATOM	746	N	ARG	A	48	49.500	-11.502	14.381	1.00	62.64	N
ATOM	748	CA	ARG	A	48	48.950	-12.787	13.940	1.00	64.49	C
ATOM	750	CB	ARG	A	48	50.048	-13.799	13.534	1.00	67.77	C
ATOM	753	CG	ARG	A	48	50.278	-13.822	12.038	1.00	68.04	C
ATOM	756	CD	ARG	A	48	51.286	-14.816	11.673	1.00	74.89	C
ATOM	759	NE	ARG	A	48	50.712	-15.969	10.921	1.00	78.86	N
ATOM	761	CZ	ARG	A	48	50.734	-17.271	11.322	1.00	76.74	C
ATOM	762	NH1	ARG	A	48	51.286	-17.691	12.474	1.00	78.50	N
ATOM	765	NH2	ARG	A	48	50.196	-18.159	10.526	1.00	78.65	N
ATOM	768	C	ARG	A	48	48.077	-13.463	14.977	1.00	65.82	C
ATOM	769	O	ARG	A	48	48.387	-13.433	16.148	1.00	69.06	O
ATOM	770	N	ASN	A	49	47.020	-14.120	14.508	1.00	64.58	N
ATOM	772	CA	ASN	A	49	46.070	-14.867	15.340	1.00	65.41	C
ATOM	774	CB	ASN	A	49	46.724	-16.066	16.015	1.00	69.43	C
ATOM	777	CG	ASN	A	49	47.310	-16.988	15.043	1.00	70.04	C
ATOM	778	OD1	ASN	A	49	46.635	-17.426	14.102	1.00	68.58	O
ATOM	779	ND2	ASN	A	49	48.587	-17.271	15.207	1.00	73.31	N
ATOM	782	C	ASN	A	49	45.334	-14.079	16.368	1.00	64.69	C
ATOM	783	O	ASN	A	49	44.878	-14.646	17.355	1.00	66.94	O
ATOM	784	N	TYR	A	50	45.214	-12.785	16.166	1.00	61.48	N
ATOM	786	CA	TYR	A	50	44.278	-12.059	16.973	1.00	62.03	C
ATOM	788	CB	TYR	A	50	44.795	-10.662	17.261	1.00	61.43	C
ATOM	791	CG	TYR	A	50	45.768	-10.556	18.432	1.00	64.24	C
ATOM	792	CD1	TYR	A	50	47.030	-11.118	18.363	1.00	65.32	C
ATOM	794	CE1	TYR	A	50	47.922	-10.989	19.436	1.00	69.50	C
ATOM	796	CZ	TYR	A	50	47.553	-10.279	20.561	1.00	70.19	C
ATOM	797	OH	TYR	A	50	48.425	-10.156	21.594	1.00	74.47	O
ATOM	799	CE2	TYR	A	50	46.328	-9.705	20.642	1.00	67.54	C
ATOM	801	CD2	TYR	A	50	45.446	-9.818	19.573	1.00	64.01	C
ATOM	803	C	TYR	A	50	42.992	-11.996	16.156	1.00	59.86	C
ATOM	804	O	TYR	A	50	43.082	-11.703	15.011	1.00	57.85	O
ATOM	805	N	ASP	A	51	41.818	-12.223	16.752	1.00	61.02	N
ATOM	807	CA	ASP	A	51	40.540	-12.225	16.037	1.00	59.60	C
ATOM	809	CB	ASP	A	51	39.472	-12.905	16.896	1.00	62.57	C

ATOM	812	CG	ASP	A	51	38.272	-13.445	16.079	1.00	61.90	C
ATOM	813	OD1	ASP	A	51	38.043	-13.027	14.914	1.00	53.66	O
ATOM	814	OD2	ASP	A	51	37.498	-14.330	16.570	1.00	65.06	O
ATOM	815	C	ASP	A	51	40.013	-10.838	15.775	1.00	57.33	C
ATOM	816	O	ASP	A	51	39.564	-10.219	16.717	1.00	59.76	O
ATOM	817	N	LEU	A	52	39.985	-10.397	14.519	1.00	54.26	N
ATOM	819	CA	LEU	A	52	39.331	-9.145	14.121	1.00	52.34	C
ATOM	821	CB	LEU	A	52	40.110	-8.415	13.029	1.00	49.67	C
ATOM	824	CG	LEU	A	52	41.456	-7.893	13.423	1.00	50.34	C
ATOM	826	CD1	LEU	A	52	42.092	-7.459	12.115	1.00	49.85	C
ATOM	830	CD2	LEU	A	52	41.305	-6.728	14.427	1.00	50.52	C
ATOM	834	C	LEU	A	52	37.948	-9.321	13.542	1.00	51.96	C
ATOM	835	O	LEU	A	52	37.444	-8.450	12.848	1.00	50.66	O
ATOM	836	N	SER	A	53	37.293	-10.399	13.864	1.00	54.16	N
ATOM	838	CA	SER	A	53	36.003	-10.618	13.274	1.00	54.53	C
ATOM	840	CB	SER	A	53	35.526	-12.042	13.555	1.00	56.90	C
ATOM	843	OG	SER	A	53	35.460	-12.203	14.922	1.00	58.05	O
ATOM	845	C	SER	A	53	34.947	-9.619	13.758	1.00	55.01	C
ATOM	846	O	SER	A	53	33.897	-9.595	13.168	1.00	56.80	O
ATOM	847	N	PHE	A	54	35.168	-8.820	14.802	1.00	54.98	N
ATOM	849	CA	PHE	A	54	34.142	-7.845	15.190	1.00	55.18	C
ATOM	851	CB	PHE	A	54	34.467	-7.156	16.478	1.00	55.26	C
ATOM	854	CG	PHE	A	54	35.840	-6.619	16.535	1.00	53.23	C
ATOM	855	CD1	PHE	A	54	36.104	-5.318	16.141	1.00	55.25	C
ATOM	857	CE1	PHE	A	54	37.420	-4.754	16.207	1.00	53.92	C
ATOM	859	CZ	PHE	A	54	38.446	-5.524	16.671	1.00	56.11	C
ATOM	861	CE2	PHE	A	54	38.166	-6.881	17.085	1.00	54.50	C
ATOM	863	CD2	PHE	A	54	36.883	-7.395	16.974	1.00	53.07	C
ATOM	865	C	PHE	A	54	33.936	-6.763	14.167	1.00	54.02	C
ATOM	866	O	PHE	A	54	32.946	-6.016	14.274	1.00	56.54	O
ATOM	867	N	LEU	A	55	34.895	-6.616	13.233	1.00	51.66	N
ATOM	869	CA	LEU	A	55	34.779	-5.672	12.103	1.00	48.92	C
ATOM	871	CB	LEU	A	55	36.115	-5.550	11.426	1.00	46.55	C
ATOM	874	CG	LEU	A	55	37.205	-5.064	12.318	1.00	46.74	C
ATOM	876	CD1	LEU	A	55	38.490	-5.184	11.621	1.00	45.91	C
ATOM	880	CD2	LEU	A	55	36.962	-3.616	12.600	1.00	47.82	C
ATOM	884	C	LEU	A	55	33.821	-6.095	10.989	1.00	48.78	C
ATOM	885	O	LEU	A	55	33.656	-5.390	9.989	1.00	49.08	O
ATOM	886	N	LYS	A	56	33.230	-7.274	11.090	1.00	50.51	N
ATOM	888	CA	LYS	A	56	32.248	-7.667	10.096	1.00	50.35	C
ATOM	890	CB	LYS	A	56	31.836	-9.114	10.238	1.00	52.48	C
ATOM	893	CG	LYS	A	56	32.973	-10.132	10.110	1.00	53.73	C
ATOM	896	CD	LYS	A	56	32.484	-11.607	9.798	1.00	58.55	C
ATOM	899	CE	LYS	A	56	33.628	-12.680	9.390	1.00	59.21	C
ATOM	902	NZ	LYS	A	56	33.071	-13.963	8.832	1.00	61.23	N
ATOM	906	C	LYS	A	56	31.048	-6.741	10.221	1.00	50.84	C
ATOM	907	O	LYS	A	56	30.296	-6.625	9.287	1.00	51.82	O
ATOM	908	N	THR	A	57	30.905	-6.036	11.339	1.00	51.04	N
ATOM	910	CA	THR	A	57	29.736	-5.205	11.583	1.00	52.25	C
ATOM	912	CB	THR	A	57	29.699	-4.985	13.031	1.00	53.38	C
ATOM	914	OG1	THR	A	57	29.273	-6.173	13.594	1.00	54.50	O
ATOM	916	CG2	THR	A	57	28.567	-4.211	13.417	1.00	58.64	C
ATOM	920	C	THR	A	57	29.757	-3.823	10.876	1.00	50.73	C
ATOM	921	O	THR	A	57	28.726	-3.142	10.690	1.00	50.93	O
ATOM	922	N	ILE	A	58	30.947	-3.412	10.510	1.00	48.03	N
ATOM	924	CA	ILE	A	58	31.102	-2.105	10.062	1.00	47.21	C
ATOM	926	CB	ILE	A	58	32.545	-1.755	10.092	1.00	45.62	C
ATOM	928	CG1	ILE	A	58	32.947	-1.611	11.543	1.00	47.30	C
ATOM	931	CD1	ILE	A	58	34.411	-1.176	11.687	1.00	48.07	C
ATOM	935	CG2	ILE	A	58	32.779	-0.361	9.424	1.00	45.43	C
ATOM	939	C	ILE	A	58	30.472	-1.946	8.683	1.00	46.76	C
ATOM	940	O	ILE	A	58	30.884	-2.571	7.729	1.00	46.94	O
ATOM	941	N	GLN	A	59	29.457	-1.091	8.633	1.00	47.32	N
ATOM	943	CA	GLN	A	59	28.765	-0.744	7.433	1.00	46.32	C
ATOM	945	CB	GLN	A	59	27.308	-0.535	7.789	1.00	49.40	C
ATOM	948	CG	GLN	A	59	26.460	-1.801	7.748	1.00	50.88	C
ATOM	951	CD	GLN	A	59	25.154	-1.630	8.490	1.00	56.62	C
ATOM	952	OE1	GLN	A	59	24.282	-0.851	8.084	1.00	61.17	O

ATOM	953	NE2	GLN	A	59	25.029	-2.319	9.621	1.00	62.39	N
ATOM	956	C	GLN	A	59	29.328	0.491	6.793	1.00	43.74	C
ATOM	957	O	GLN	A	59	29.321	0.621	5.609	1.00	42.04	O
ATOM	958	N	GLU	A	60	29.790	1.437	7.575	1.00	43.80	N
ATOM	960	CA	GLU	A	60	30.199	2.713	6.964	1.00	43.43	C
ATOM	962	CB	GLU	A	60	28.983	3.525	6.485	1.00	45.57	C
ATOM	965	CG	GLU	A	60	27.904	3.828	7.486	1.00	49.95	C
ATOM	968	CD	GLU	A	60	26.781	4.755	6.943	1.00	55.76	C
ATOM	969	OE1	GLU	A	60	25.747	4.155	6.484	1.00	53.00	O
ATOM	970	OE2	GLU	A	60	26.933	6.058	7.002	1.00	55.62	O
ATOM	971	C	GLU	A	60	31.110	3.560	7.813	1.00	41.36	C
ATOM	972	O	GLU	A	60	31.060	3.489	8.959	1.00	41.52	O
ATOM	973	N	VAL	A	61	31.956	4.343	7.171	1.00	40.34	N
ATOM	975	CA	VAL	A	61	32.955	5.212	7.787	1.00	40.06	C
ATOM	977	CB	VAL	A	61	34.383	4.620	7.589	1.00	38.27	C
ATOM	979	CG1	VAL	A	61	35.479	5.597	8.136	1.00	38.94	C
ATOM	983	CG2	VAL	A	61	34.453	3.245	8.246	1.00	36.00	C
ATOM	987	C	VAL	A	61	32.892	6.673	7.263	1.00	41.13	C
ATOM	988	O	VAL	A	61	33.035	7.009	6.073	1.00	40.36	O
ATOM	989	N	ALA	A	62	32.717	7.588	8.167	1.00	43.43	N
ATOM	991	CA	ALA	A	62	32.644	8.993	7.741	1.00	44.23	C
ATOM	993	CB	ALA	A	62	32.068	9.827	8.844	1.00	45.33	C
ATOM	997	C	ALA	A	62	34.000	9.548	7.301	1.00	42.41	C
ATOM	998	O	ALA	A	62	34.058	10.357	6.397	1.00	43.72	O
ATOM	999	N	GLY	A	63	35.062	9.160	7.984	1.00	41.42	N
ATOM	1001	CA	GLY	A	63	36.337	9.844	7.875	1.00	41.84	C
ATOM	1004	C	GLY	A	63	37.229	9.070	6.951	1.00	40.75	C
ATOM	1005	O	GLY	A	63	36.820	8.695	5.882	1.00	40.21	O
ATOM	1006	N	TYR	A	64	38.425	8.717	7.359	1.00	40.83	N
ATOM	1008	CA	TYR	A	64	39.185	7.771	6.561	1.00	39.12	C
ATOM	1010	CB	TYR	A	64	40.559	8.330	6.344	1.00	40.77	C
ATOM	1013	CG	TYR	A	64	41.366	8.605	7.595	1.00	40.87	C
ATOM	1014	CD1	TYR	A	64	42.182	7.617	8.184	1.00	42.70	C
ATOM	1016	CE1	TYR	A	64	42.969	7.892	9.305	1.00	44.16	C
ATOM	1018	CZ	TYR	A	64	42.910	9.171	9.833	1.00	42.92	C
ATOM	1019	OH	TYR	A	64	43.627	9.512	10.935	1.00	43.56	O
ATOM	1021	CE2	TYR	A	64	42.090	10.108	9.279	1.00	43.84	C
ATOM	1023	CD2	TYR	A	64	41.353	9.838	8.153	1.00	43.12	C
ATOM	1025	C	TYR	A	64	39.325	6.394	7.210	1.00	39.09	C
ATOM	1026	O	TYR	A	64	39.007	6.183	8.369	1.00	40.13	O
ATOM	1027	N	VAL	A	65	39.833	5.469	6.425	1.00	37.79	N
ATOM	1029	CA	VAL	A	65	40.165	4.157	6.845	1.00	37.58	C
ATOM	1031	CB	VAL	A	65	39.451	3.155	5.959	1.00	36.44	C
ATOM	1033	CG1	VAL	A	65	39.941	1.695	6.176	1.00	35.49	C
ATOM	1037	CG2	VAL	A	65	38.020	3.234	6.276	1.00	38.10	C
ATOM	1041	C	VAL	A	65	41.665	4.017	6.681	1.00	38.37	C
ATOM	1042	O	VAL	A	65	42.169	4.112	5.579	1.00	38.62	O
ATOM	1043	N	LEU	A	66	42.377	3.760	7.760	1.00	38.89	N
ATOM	1045	CA	LEU	A	66	43.750	3.428	7.621	1.00	40.32	C
ATOM	1047	CB	LEU	A	66	44.519	4.432	8.405	1.00	42.88	C
ATOM	1050	CG	LEU	A	66	45.904	4.043	8.875	1.00	45.09	C
ATOM	1052	CD1	LEU	A	66	46.821	3.880	7.728	1.00	44.69	C
ATOM	1056	CD2	LEU	A	66	46.373	5.153	9.836	1.00	48.02	C
ATOM	1060	C	LEU	A	66	44.042	2.058	8.155	1.00	40.80	C
ATOM	1061	O	LEU	A	66	43.832	1.757	9.314	1.00	42.77	O
ATOM	1062	N	ILE	A	67	44.576	1.198	7.326	1.00	40.95	N
ATOM	1064	CA	ILE	A	67	45.001	-0.132	7.747	1.00	40.61	C
ATOM	1066	CB	ILE	A	67	44.324	-1.113	6.861	1.00	39.42	C
ATOM	1068	CG1	ILE	A	67	42.836	-1.076	7.096	1.00	37.05	C
ATOM	1071	CD1	ILE	A	67	42.129	-1.575	5.966	1.00	36.61	C
ATOM	1075	CG2	ILE	A	67	44.845	-2.486	7.132	1.00	42.01	C
ATOM	1079	C	ILE	A	67	46.526	-0.226	7.596	1.00	42.09	C
ATOM	1080	O	ILE	A	67	47.035	-0.356	6.481	1.00	42.06	O
ATOM	1081	N	ALA	A	68	47.252	-0.097	8.693	1.00	43.71	N
ATOM	1083	CA	ALA	A	68	48.691	-0.174	8.634	1.00	46.04	C
ATOM	1085	CB	ALA	A	68	49.231	1.175	8.518	1.00	46.74	C
ATOM	1089	C	ALA	A	68	49.421	-0.962	9.771	1.00	48.21	C
ATOM	1090	O	ALA	A	68	48.939	-1.126	10.901	1.00	47.90	O

ATOM 1091	N	LEU	A	69	50.597	-1.464	9.396	1.00	50.08	N
ATOM 1093	CA	LEU	A	69	51.542	-2.143	10.292	1.00	52.36	C
ATOM 1095	CB	LEU	A	69	52.199	-1.127	11.234	1.00	53.98	C
ATOM 1098	CG	LEU	A	69	52.815	0.105	10.537	1.00	54.54	C
ATOM 1100	CD1	LEU	A	69	53.048	1.269	11.481	1.00	55.84	C
ATOM 1104	CD2	LEU	A	69	54.114	-0.210	9.926	1.00	56.72	C
ATOM 1108	C	LEU	A	69	50.917	-3.355	10.993	1.00	51.43	C
ATOM 1109	O	LEU	A	69	51.253	-3.718	12.102	1.00	52.82	O
ATOM 1110	N	ASN	A	70	50.034	-3.989	10.254	1.00	49.53	N
ATOM 1112	CA	ASN	A	70	49.288	-5.146	10.709	1.00	49.78	C
ATOM 1114	CB	ASN	A	70	47.887	-5.148	10.071	1.00	47.45	C
ATOM 1117	CG	ASN	A	70	47.025	-4.054	10.557	1.00	45.01	C
ATOM 1118	OD1	ASN	A	70	46.654	-4.043	11.719	1.00	45.13	O
ATOM 1119	ND2	ASN	A	70	46.719	-3.102	9.690	1.00	43.78	N
ATOM 1122	C	ASN	A	70	49.990	-6.380	10.192	1.00	51.18	C
ATOM 1123	O	ASN	A	70	50.449	-6.375	9.044	1.00	50.13	O
ATOM 1124	N	THR	A	71	50.106	-7.425	11.001	1.00	53.00	N
ATOM 1126	CA	THR	A	71	50.513	-8.709	10.427	1.00	55.45	C
ATOM 1128	CB	THR	A	71	51.718	-9.356	11.116	1.00	58.70	C
ATOM 1130	OG1	THR	A	71	51.432	-9.593	12.492	1.00	59.65	O
ATOM 1132	CG2	THR	A	71	52.909	-8.463	11.068	1.00	60.02	C
ATOM 1136	C	THR	A	71	49.382	-9.714	10.440	1.00	55.26	C
ATOM 1137	O	THR	A	71	49.550	-10.818	9.952	1.00	55.74	O
ATOM 1138	N	VAL	A	72	48.242	-9.316	11.005	1.00	53.94	N
ATOM 1140	CA	VAL	A	72	47.114	-10.219	11.120	1.00	53.04	C
ATOM 1142	CB	VAL	A	72	45.909	-9.515	11.839	1.00	51.69	C
ATOM 1144	CG1	VAL	A	72	45.385	-8.312	11.059	1.00	47.61	C
ATOM 1148	CG2	VAL	A	72	44.786	-10.530	12.214	1.00	51.56	C
ATOM 1152	C	VAL	A	72	46.800	-10.776	9.727	1.00	51.50	C
ATOM 1153	O	VAL	A	72	46.932	-10.096	8.734	1.00	50.25	O
ATOM 1154	N	GLU	A	73	46.456	-12.047	9.672	1.00	53.42	N
ATOM 1156	CA	GLU	A	73	46.307	-12.720	8.413	1.00	53.56	C
ATOM 1158	CB	GLU	A	73	46.091	-14.219	8.575	1.00	55.45	C
ATOM 1161	CG	GLU	A	73	46.005	-14.829	7.190	1.00	57.21	C
ATOM 1164	CD	GLU	A	73	46.159	-16.328	7.121	1.00	65.02	C
ATOM 1165	OE1	GLU	A	73	46.539	-16.914	8.248	1.00	68.29	O
ATOM 1166	OE2	GLU	A	73	45.894	-16.869	5.933	1.00	62.47	O
ATOM 1167	C	GLU	A	73	45.169	-12.057	7.647	1.00	51.07	C
ATOM 1168	O	GLU	A	73	45.351	-11.655	6.539	1.00	49.97	O
ATOM 1169	N	ARG	A	74	44.011	-11.888	8.257	1.00	50.85	N
ATOM 1171	CA	ARG	A	74	42.877	-11.303	7.545	1.00	49.00	C
ATOM 1173	CB	ARG	A	74	41.874	-12.437	7.294	1.00	49.93	C
ATOM 1176	CG	ARG	A	74	40.411	-12.118	7.396	1.00	51.98	C
ATOM 1179	CD	ARG	A	74	39.468	-13.326	7.038	1.00	54.93	C
ATOM 1182	NE	ARG	A	74	39.084	-13.105	5.645	1.00	59.31	N
ATOM 1184	CZ	ARG	A	74	38.269	-13.895	4.959	1.00	62.52	C
ATOM 1185	NH1	ARG	A	74	37.762	-14.941	5.616	1.00	65.45	N
ATOM 1188	NH2	ARG	A	74	37.967	-13.648	3.635	1.00	58.43	N
ATOM 1191	C	ARG	A	74	42.266	-10.058	8.264	1.00	46.63	C
ATOM 1192	O	ARG	A	74	42.386	-9.919	9.436	1.00	46.29	O
ATOM 1193	N	ILE	A	75	41.684	-9.133	7.517	1.00	44.98	N
ATOM 1195	CA	ILE	A	75	40.955	-7.991	8.086	1.00	43.65	C
ATOM 1197	CB	ILE	A	75	41.725	-6.736	7.884	1.00	42.04	C
ATOM 1199	CG1	ILE	A	75	42.831	-6.684	8.929	1.00	43.21	C
ATOM 1202	CD1	ILE	A	75	44.040	-5.756	8.633	1.00	42.89	C
ATOM 1206	CG2	ILE	A	75	40.805	-5.538	8.084	1.00	42.87	C
ATOM 1210	C	ILE	A	75	39.538	-7.913	7.476	1.00	42.35	C
ATOM 1211	O	ILE	A	75	39.350	-7.353	6.451	1.00	39.45	O
ATOM 1212	N	PRO	A	76	38.576	-8.592	8.099	1.00	43.86	N
ATOM 1213	CA	PRO	A	76	37.285	-8.857	7.461	1.00	43.31	C
ATOM 1215	CB	PRO	A	76	36.796	-10.049	8.210	1.00	43.97	C
ATOM 1218	CG	PRO	A	76	37.340	-9.772	9.568	1.00	45.76	C
ATOM 1221	CD	PRO	A	76	38.691	-9.247	9.406	1.00	44.45	C
ATOM 1224	C	PRO	A	76	36.324	-7.728	7.568	1.00	42.78	C
ATOM 1225	O	PRO	A	76	35.396	-7.831	8.333	1.00	45.44	O
ATOM 1226	N	LEU	A	77	36.535	-6.697	6.748	1.00	41.49	N
ATOM 1228	CA	LEU	A	77	35.641	-5.567	6.537	1.00	39.87	C
ATOM 1230	CB	LEU	A	77	36.546	-4.409	6.198	1.00	38.77	C

ATOM 1233	CG	LEU	A	77	37.158	-3.827	7.512	1.00	41.18	C
ATOM 1235	CD1	LEU	A	77	38.215	-2.809	7.271	1.00	41.61	C
ATOM 1239	CD2	LEU	A	77	36.111	-3.156	8.502	1.00	40.56	C
ATOM 1243	C	LEU	A	77	34.637	-5.929	5.427	1.00	41.28	C
ATOM 1244	O	LEU	A	77	34.447	-5.251	4.413	1.00	42.53	O
ATOM 1245	N	GLU	A	78	33.972	-7.055	5.647	1.00	43.65	N
ATOM 1247	CA	GLU	A	78	33.051	-7.679	4.726	1.00	44.72	C
ATOM 1249	CB	GLU	A	78	32.625	-9.074	5.243	1.00	47.90	C
ATOM 1252	CG	GLU	A	78	33.638	-10.261	5.125	1.00	49.04	C
ATOM 1255	CD	GLU	A	78	33.290	-11.463	6.010	1.00	57.37	C
ATOM 1256	OE1	GLU	A	78	32.198	-11.438	6.698	1.00	60.60	O
ATOM 1257	OE2	GLU	A	78	34.099	-12.458	6.053	1.00	64.67	O
ATOM 1258	C	GLU	A	78	31.804	-6.852	4.471	1.00	45.32	C
ATOM 1259	O	GLU	A	78	31.180	-7.118	3.483	1.00	48.23	O
ATOM 1260	N	ASN	A	79	31.427	-5.864	5.300	1.00	45.00	N
ATOM 1262	CA	ASN	A	79	30.167	-5.128	5.064	1.00	45.06	C
ATOM 1264	CB	ASN	A	79	29.175	-5.520	6.123	1.00	47.94	C
ATOM 1267	CG	ASN	A	79	28.893	-7.032	6.112	1.00	46.44	C
ATOM 1268	OD1	ASN	A	79	28.282	-7.536	5.190	1.00	48.09	O
ATOM 1269	ND2	ASN	A	79	29.350	-7.723	7.101	1.00	45.47	N
ATOM 1272	C	ASN	A	79	30.263	-3.572	4.936	1.00	44.03	C
ATOM 1273	O	ASN	A	79	29.243	-2.882	4.734	1.00	44.31	O
ATOM 1274	N	LEU	A	80	31.505	-3.086	4.968	1.00	41.14	N
ATOM 1276	CA	LEU	A	80	31.853	-1.726	4.783	1.00	39.81	C
ATOM 1278	CB	LEU	A	80	33.381	-1.607	4.910	1.00	35.95	C
ATOM 1281	CG	LEU	A	80	33.900	-0.184	4.736	1.00	39.21	C
ATOM 1283	CD1	LEU	A	80	33.164	0.825	5.606	1.00	37.81	C
ATOM 1287	CD2	LEU	A	80	35.397	0.048	4.966	1.00	41.93	C
ATOM 1291	C	LEU	A	80	31.377	-1.250	3.421	1.00	40.93	C
ATOM 1292	O	LEU	A	80	32.049	-1.496	2.469	1.00	42.60	O
ATOM 1293	N	GLN	A	81	30.255	-0.537	3.300	1.00	42.84	N
ATOM 1295	CA	GLN	A	81	29.796	-0.098	1.984	1.00	43.93	C
ATOM 1297	CB	GLN	A	81	28.269	0.058	1.841	1.00	46.43	C
ATOM 1300	CG	GLN	A	81	27.410	-0.770	2.822	1.00	53.59	C
ATOM 1303	CD	GLN	A	81	25.871	-0.694	2.613	1.00	59.31	C
ATOM 1304	OE1	GLN	A	81	25.397	-0.526	1.466	1.00	64.23	O
ATOM 1305	NE2	GLN	A	81	25.105	-0.867	3.707	1.00	58.31	N
ATOM 1308	C	GLN	A	81	30.427	1.192	1.574	1.00	43.10	C
ATOM 1309	O	GLN	A	81	30.390	1.526	0.406	1.00	44.40	O
ATOM 1310	N	ILE	A	82	30.926	1.983	2.500	1.00	42.20	N
ATOM 1312	CA	ILE	A	82	31.227	3.374	2.148	1.00	41.78	C
ATOM 1314	CB	ILE	A	82	29.952	4.210	2.093	1.00	43.88	C
ATOM 1316	CG1	ILE	A	82	30.226	5.693	1.936	1.00	44.99	C
ATOM 1319	CD1	ILE	A	82	28.980	6.417	1.322	1.00	47.81	C
ATOM 1323	CG2	ILE	A	82	29.181	4.105	3.300	1.00	46.56	C
ATOM 1327	C	ILE	A	82	32.123	4.000	3.099	1.00	40.42	C
ATOM 1328	O	ILE	A	82	31.890	3.965	4.277	1.00	40.10	O
ATOM 1329	N	ILE	A	83	33.149	4.590	2.559	1.00	40.78	N
ATOM 1331	CA	ILE	A	83	33.982	5.550	3.268	1.00	41.60	C
ATOM 1333	CB	ILE	A	83	35.472	5.198	2.997	1.00	40.44	C
ATOM 1335	CG1	ILE	A	83	35.765	3.848	3.622	1.00	40.01	C
ATOM 1338	CD1	ILE	A	83	36.743	3.034	2.815	1.00	42.41	C
ATOM 1342	CG2	ILE	A	83	36.410	6.236	3.487	1.00	38.30	C
ATOM 1346	C	ILE	A	83	33.669	6.893	2.695	1.00	42.50	C
ATOM 1347	O	ILE	A	83	33.999	7.150	1.579	1.00	43.19	O
ATOM 1348	N	ARG	A	84	33.018	7.761	3.415	1.00	44.85	N
ATOM 1350	CA	ARG	A	84	32.956	9.181	2.954	1.00	47.16	C
ATOM 1352	CB	ARG	A	84	31.957	9.935	3.837	1.00	48.61	C
ATOM 1355	CG	ARG	A	84	30.620	9.238	4.016	1.00	46.73	C
ATOM 1358	CD	ARG	A	84	29.729	9.845	5.062	1.00	47.11	C
ATOM 1361	NE	ARG	A	84	28.625	8.937	5.218	1.00	49.65	N
ATOM 1363	CZ	ARG	A	84	27.542	8.873	4.460	1.00	52.43	C
ATOM 1364	NH1	ARG	A	84	27.321	9.737	3.523	1.00	56.44	N
ATOM 1367	NH2	ARG	A	84	26.651	7.905	4.649	1.00	56.44	N
ATOM 1370	C	ARG	A	84	34.366	9.791	3.133	1.00	47.81	C
ATOM 1371	O	ARG	A	84	35.119	9.296	3.931	1.00	49.72	O
ATOM 1372	N	GLY	A	85	34.798	10.845	2.512	1.00	49.39	N
ATOM 1374	CA	GLY	A	85	36.098	11.343	3.004	1.00	49.30	C

ATOM 1377	C	GLY	A	85	36.067	12.641	3.784	1.00	51.38	C
ATOM 1378	O	GLY	A	85	36.672	13.702	3.350	1.00	54.87	O
ATOM 1379	N	ASN	A	86	35.350	12.634	4.894	1.00	50.44	N
ATOM 1381	CA	ASN	A	86	35.247	13.909	5.616	1.00	53.16	C
ATOM 1383	CB	ASN	A	86	34.137	13.970	6.662	1.00	54.49	C
ATOM 1386	CG	ASN	A	86	32.855	13.473	6.133	1.00	56.57	C
ATOM 1387	OD1	ASN	A	86	32.589	13.516	4.880	1.00	57.07	O
ATOM 1388	ND2	ASN	A	86	32.041	12.937	7.053	1.00	58.10	N
ATOM 1391	C	ASN	A	86	36.544	14.299	6.243	1.00	52.27	C
ATOM 1392	O	ASN	A	86	36.736	15.441	6.387	1.00	54.97	O
ATOM 1393	N	MET	A	87	37.376	13.355	6.672	1.00	49.69	N
ATOM 1395	CA	MET	A	87	38.812	13.569	6.874	1.00	50.28	C
ATOM 1397	CB	MET	A	87	39.369	13.214	8.246	1.00	50.21	C
ATOM 1400	CG	MET	A	87	38.562	13.459	9.436	1.00	54.83	C
ATOM 1403	SD	MET	A	87	39.259	14.846	10.126	1.00	63.81	S
ATOM 1404	CE	MET	A	87	38.913	15.937	8.831	1.00	64.30	C
ATOM 1408	C	MET	A	87	39.563	12.647	5.990	1.00	48.04	C
ATOM 1409	O	MET	A	87	39.001	11.677	5.499	1.00	46.37	O
ATOM 1410	N	TYR	A	88	40.857	12.939	5.889	1.00	49.45	N
ATOM 1412	CA	TYR	A	88	41.828	12.188	5.123	1.00	49.57	C
ATOM 1414	CB	TYR	A	88	42.405	13.024	3.985	1.00	50.98	C
ATOM 1417	CG	TYR	A	88	41.429	13.553	2.930	1.00	53.15	C
ATOM 1418	CD1	TYR	A	88	41.227	14.877	2.711	1.00	57.66	C
ATOM 1420	CE1	TYR	A	88	40.400	15.281	1.763	1.00	56.97	C
ATOM 1422	CZ	TYR	A	88	39.767	14.410	0.984	1.00	52.93	C
ATOM 1423	OH	TYR	A	88	38.880	14.736	0.021	1.00	53.52	O
ATOM 1425	CE2	TYR	A	88	39.952	13.177	1.150	1.00	52.34	C
ATOM 1427	CD2	TYR	A	88	40.787	12.717	2.112	1.00	54.43	C
ATOM 1429	C	TYR	A	88	43.005	11.772	5.994	1.00	50.38	C
ATOM 1430	O	TYR	A	88	43.540	12.623	6.636	1.00	51.81	O
ATOM 1431	N	TYR	A	89	43.461	10.494	6.003	1.00	49.68	N
ATOM 1433	CA	TYR	A	89	44.851	10.226	6.458	1.00	51.12	C
ATOM 1435	CB	TYR	A	89	45.199	8.793	6.230	1.00	48.69	C
ATOM 1438	CG	TYR	A	89	46.550	8.377	6.698	1.00	49.97	C
ATOM 1439	CD1	TYR	A	89	46.788	8.184	7.998	1.00	52.94	C
ATOM 1441	CE1	TYR	A	89	48.046	7.787	8.456	1.00	54.76	C
ATOM 1443	CZ	TYR	A	89	49.063	7.565	7.595	1.00	53.29	C
ATOM 1444	OH	TYR	A	89	50.254	7.164	8.142	1.00	54.86	O
ATOM 1446	CE2	TYR	A	89	48.855	7.728	6.279	1.00	52.09	C
ATOM 1448	CD2	TYR	A	89	47.581	8.133	5.832	1.00	52.11	C
ATOM 1450	C	TYR	A	89	45.758	11.121	5.592	1.00	54.75	C
ATOM 1451	O	TYR	A	89	45.311	11.553	4.499	1.00	57.07	O
ATOM 1452	N	GLU	A	90	46.990	11.416	6.012	1.00	56.38	N
ATOM 1454	CA	GLU	A	90	47.978	12.129	5.116	1.00	58.43	C
ATOM 1456	CB	GLU	A	90	49.394	11.443	5.224	1.00	60.02	C
ATOM 1459	CG	GLU	A	90	49.655	10.346	4.183	1.00	63.93	C
ATOM 1462	CD	GLU	A	90	51.108	9.763	4.087	1.00	72.04	C
ATOM 1463	OE1	GLU	A	90	52.082	10.496	4.526	1.00	73.67	O
ATOM 1464	OE2	GLU	A	90	51.246	8.551	3.534	1.00	70.25	O
ATOM 1465	C	GLU	A	90	47.584	12.478	3.607	1.00	56.72	C
ATOM 1466	O	GLU	A	90	47.069	11.643	2.909	1.00	53.74	O
ATOM 1467	N	ASN	A	91	47.844	13.712	3.136	1.00	59.85	N
ATOM 1469	CA	ASN	A	91	47.846	14.086	1.691	1.00	61.10	C
ATOM 1471	CB	ASN	A	91	48.956	13.309	0.852	1.00	62.38	C
ATOM 1474	CG	ASN	A	91	50.403	13.342	1.452	1.00	66.43	C
ATOM 1475	OD1	ASN	A	91	51.269	14.148	1.040	1.00	66.35	O
ATOM 1476	ND2	ASN	A	91	50.692	12.379	2.344	1.00	68.77	N
ATOM 1479	C	ASN	A	91	46.511	13.735	1.008	1.00	57.87	C
ATOM 1480	O	ASN	A	91	46.489	13.144	-0.104	1.00	58.73	O
ATOM 1481	N	SER	A	92	45.373	13.936	1.639	1.00	54.13	N
ATOM 1483	CA	SER	A	92	44.142	13.510	0.901	1.00	50.01	C
ATOM 1485	CB	SER	A	92	43.991	14.441	-0.308	1.00	53.39	C
ATOM 1488	OG	SER	A	92	44.397	13.795	-1.479	1.00	55.51	O
ATOM 1490	C	SER	A	92	43.861	11.994	0.390	1.00	45.90	C
ATOM 1491	O	SER	A	92	43.244	11.776	-0.632	1.00	45.63	O
ATOM 1492	N	TYR	A	93	44.238	11.012	1.185	1.00	44.30	N
ATOM 1494	CA	TYR	A	93	43.804	9.637	0.991	1.00	42.94	C
ATOM 1496	CB	TYR	A	93	44.955	8.620	1.158	1.00	41.72	C



ATOM 1499	CG	TYR	A	93	46.166	8.787	0.278	1.00	43.87	C
ATOM 1500	CD1	TYR	A	93	47.407	9.146	0.829	1.00	46.10	C
ATOM 1502	CE1	TYR	A	93	48.541	9.327	0.012	1.00	50.76	C
ATOM 1504	CZ	TYR	A	93	48.439	9.139	-1.371	1.00	48.97	C
ATOM 1505	OH	TYR	A	93	49.527	9.284	-2.159	1.00	51.85	O
ATOM 1507	CE2	TYR	A	93	47.228	8.775	-1.937	1.00	47.04	C
ATOM 1509	CD2	TYR	A	93	46.087	8.588	-1.104	1.00	44.48	C
ATOM 1511	C	TYR	A	93	42.754	9.357	2.068	1.00	42.52	C
ATOM 1512	O	TYR	A	93	43.009	9.539	3.289	1.00	42.34	O
ATOM 1513	N	ALA	A	94	41.585	8.947	1.581	1.00	42.12	N
ATOM 1515	CA	ALA	A	94	40.467	8.458	2.386	1.00	41.29	C
ATOM 1517	CB	ALA	A	94	39.124	8.712	1.688	1.00	41.93	C
ATOM 1521	C	ALA	A	94	40.538	7.046	2.741	1.00	36.58	C
ATOM 1522	O	ALA	A	94	39.832	6.652	3.648	1.00	38.88	O
ATOM 1523	N	LEU	A	95	41.322	6.287	1.976	1.00	37.35	N
ATOM 1525	CA	LEU	A	95	41.677	4.889	2.345	1.00	36.53	C
ATOM 1527	CB	LEU	A	95	40.838	3.878	1.575	1.00	35.59	C
ATOM 1530	CG	LEU	A	95	41.249	2.405	1.730	1.00	38.72	C
ATOM 1532	CD1	LEU	A	95	40.952	1.856	3.092	1.00	38.41	C
ATOM 1536	CD2	LEU	A	95	40.553	1.538	0.725	1.00	40.76	C
ATOM 1540	C	LEU	A	95	43.155	4.620	2.097	1.00	36.96	C
ATOM 1541	O	LEU	A	95	43.702	4.902	1.040	1.00	36.85	O
ATOM 1542	N	ALA	A	96	43.811	4.030	3.064	1.00	36.75	N
ATOM 1544	CA	ALA	A	96	45.256	3.954	2.964	1.00	39.78	C
ATOM 1546	CB	ALA	A	96	45.925	5.164	3.605	1.00	41.49	C
ATOM 1550	C	ALA	A	96	45.666	2.689	3.629	1.00	40.17	C
ATOM 1551	O	ALA	A	96	45.306	2.465	4.723	1.00	39.98	O
ATOM 1552	N	VAL	A	97	46.352	1.827	2.908	1.00	41.75	N
ATOM 1554	CA	VAL	A	97	46.585	0.484	3.341	1.00	42.09	C
ATOM 1556	CB	VAL	A	97	45.788	-0.476	2.463	1.00	41.49	C
ATOM 1558	CG1	VAL	A	97	46.026	-1.918	2.852	1.00	42.14	C
ATOM 1562	CG2	VAL	A	97	44.323	-0.177	2.615	1.00	41.22	C
ATOM 1566	C	VAL	A	97	48.086	0.352	3.161	1.00	44.34	C
ATOM 1567	O	VAL	A	97	48.554	0.134	2.051	1.00	45.40	O
ATOM 1568	N	LEU	A	98	48.818	0.528	4.272	1.00	45.17	N
ATOM 1570	CA	LEU	A	98	50.276	0.703	4.325	1.00	46.32	C
ATOM 1572	CB	LEU	A	98	50.596	2.056	4.941	1.00	47.45	C
ATOM 1575	CG	LEU	A	98	49.900	3.267	4.427	1.00	46.46	C
ATOM 1577	CD1	LEU	A	98	50.711	4.432	4.845	1.00	49.07	C
ATOM 1581	CD2	LEU	A	98	49.904	3.181	2.962	1.00	49.37	C
ATOM 1585	C	LEU	A	98	51.052	-0.301	5.190	1.00	46.58	C
ATOM 1586	O	LEU	A	98	50.744	-0.562	6.346	1.00	44.34	O
ATOM 1587	N	SER	A	99	52.121	-0.774	4.585	1.00	48.54	N
ATOM 1589	CA	SER	A	99	53.196	-1.505	5.215	1.00	51.61	C
ATOM 1591	CB	SER	A	99	54.303	-0.529	5.593	1.00	54.70	C
ATOM 1594	OG	SER	A	99	53.951	0.131	6.737	1.00	56.30	O
ATOM 1596	C	SER	A	99	52.781	-2.478	6.314	1.00	50.51	C
ATOM 1597	O	SER	A	99	53.385	-2.555	7.367	1.00	51.44	O
ATOM 1598	N	ASN	A	100	51.810	-3.301	5.909	1.00	48.91	N
ATOM 1600	CA	ASN	A	100	51.163	-4.336	6.673	1.00	48.16	C
ATOM 1602	CB	ASN	A	100	49.731	-4.596	6.150	1.00	45.34	C
ATOM 1605	CG	ASN	A	100	48.753	-3.488	6.537	1.00	43.98	C
ATOM 1606	OD1	ASN	A	100	48.493	-3.220	7.752	1.00	44.49	O
ATOM 1607	ND2	ASN	A	100	48.219	-2.820	5.529	1.00	40.05	N
ATOM 1610	C	ASN	A	100	51.948	-5.611	6.590	1.00	50.03	C
ATOM 1611	O	ASN	A	100	51.466	-6.581	6.059	1.00	49.67	O
ATOM 1612	N	TYR	A	101	53.167	-5.561	7.095	1.00	52.63	N
ATOM 1614	CA	TYR	A	101	54.057	-6.682	7.206	1.00	55.81	C
ATOM 1616	CB	TYR	A	101	54.935	-6.876	5.957	1.00	57.44	C
ATOM 1619	CG	TYR	A	101	55.910	-5.739	5.711	1.00	61.09	C
ATOM 1620	CD1	TYR	A	101	57.282	-5.915	5.822	1.00	65.26	C
ATOM 1622	CE1	TYR	A	101	58.178	-4.835	5.598	1.00	67.71	C
ATOM 1624	CZ	TYR	A	101	57.689	-3.571	5.279	1.00	66.52	C
ATOM 1625	OH	TYR	A	101	58.504	-2.489	5.080	1.00	66.74	O
ATOM 1627	CE2	TYR	A	101	56.339	-3.370	5.169	1.00	63.37	C
ATOM 1629	CD2	TYR	A	101	55.450	-4.453	5.380	1.00	61.79	C
ATOM 1631	C	TYR	A	101	54.922	-6.375	8.399	1.00	59.02	C
ATOM 1632	O	TYR	A	101	54.849	-5.281	8.984	1.00	59.11	O

ATOM 1633	N	ASP	A	102	55.740	-7.351	8.775	1.00	62.99	N
ATOM 1635	CA	ASP	A	102	56.695	-7.200	9.858	1.00	66.01	C
ATOM 1637	CB	ASP	A	102	56.193	-7.849	11.169	1.00	66.35	C
ATOM 1640	CG	ASP	A	102	56.362	-9.374	11.239	1.00	70.03	C
ATOM 1641	OD1	ASP	A	102	56.452	-10.092	10.212	1.00	73.62	O
ATOM 1642	OD2	ASP	A	102	56.400	-9.961	12.340	1.00	72.18	O
ATOM 1643	C	ASP	A	102	58.069	-7.681	9.459	1.00	69.88	C
ATOM 1644	O	ASP	A	102	58.284	-8.255	8.390	1.00	69.60	O
ATOM 1645	N	ALA	A	103	59.005	-7.382	10.340	1.00	73.77	N
ATOM 1647	CA	ALA	A	103	60.390	-7.786	10.188	1.00	78.79	C
ATOM 1649	CB	ALA	A	103	61.234	-7.388	11.471	1.00	82.44	C
ATOM 1653	C	ALA	A	103	60.469	-9.265	9.936	1.00	80.28	C
ATOM 1654	O	ALA	A	103	61.349	-9.677	9.202	1.00	83.58	O
ATOM 1655	N	ASN	A	104	59.535	-10.036	10.519	1.00	78.84	N
ATOM 1657	CA	ASN	A	104	59.562	-11.517	10.518	1.00	81.30	C
ATOM 1659	CB	ASN	A	104	58.700	-12.058	11.667	1.00	80.83	C
ATOM 1662	CG	ASN	A	104	59.503	-12.368	12.896	1.00	85.11	C
ATOM 1663	OD1	ASN	A	104	60.124	-13.432	12.973	1.00	88.51	O
ATOM 1664	ND2	ASN	A	104	59.490	-11.439	13.881	1.00	83.35	N
ATOM 1667	C	ASN	A	104	59.156	-12.295	9.262	1.00	80.02	C
ATOM 1668	O	ASN	A	104	59.059	-13.525	9.360	1.00	81.89	O
ATOM 1669	N	ALA	A	105	58.967	-11.613	8.120	1.00	77.36	N
ATOM 1671	CA	ALA	A	105	58.482	-12.224	6.874	1.00	76.38	C
ATOM 1673	CB	ALA	A	105	59.452	-13.356	6.374	1.00	80.34	C
ATOM 1677	C	ALA	A	105	57.000	-12.731	6.961	1.00	73.17	C
ATOM 1678	O	ALA	A	105	56.718	-13.889	6.700	1.00	73.97	O
ATOM 1679	N	THR	A	106	56.081	-11.824	7.298	1.00	69.66	N
ATOM 1681	CA	THR	A	106	54.660	-12.097	7.532	1.00	66.80	C
ATOM 1683	CB	THR	A	106	54.420	-12.371	9.047	1.00	68.37	C
ATOM 1685	OG1	THR	A	106	55.307	-13.390	9.523	1.00	72.58	O
ATOM 1687	CG2	THR	A	106	52.978	-12.913	9.329	1.00	67.58	C
ATOM 1691	C	THR	A	106	53.902	-10.812	7.270	1.00	62.45	C
ATOM 1692	O	THR	A	106	54.416	-9.762	7.574	1.00	62.25	O
ATOM 1693	N	GLY	A	107	52.673	-10.886	6.782	1.00	58.72	N
ATOM 1695	CA	GLY	A	107	51.864	-9.712	6.675	1.00	55.00	C
ATOM 1698	C	GLY	A	107	50.400	-9.905	6.384	1.00	53.15	C
ATOM 1699	O	GLY	A	107	49.843	-10.953	6.433	1.00	53.80	O
ATOM 1700	N	LEU	A	108	49.751	-8.814	6.049	1.00	52.41	N
ATOM 1702	CA	LEU	A	108	48.340	-8.814	5.782	1.00	50.68	C
ATOM 1704	CB	LEU	A	108	47.813	-7.395	5.753	1.00	47.39	C
ATOM 1707	CG	LEU	A	108	46.336	-7.409	5.418	1.00	45.14	C
ATOM 1709	CD1	LEU	A	108	45.449	-8.110	6.475	1.00	45.32	C
ATOM 1713	CD2	LEU	A	108	45.931	-5.996	5.325	1.00	43.71	C
ATOM 1717	C	LEU	A	108	48.153	-9.472	4.422	1.00	52.50	C
ATOM 1718	O	LEU	A	108	48.849	-9.151	3.447	1.00	55.00	O
ATOM 1719	N	LYS	A	109	47.179	-10.355	4.355	1.00	52.74	N
ATOM 1721	CA	LYS	A	109	46.955	-11.238	3.229	1.00	53.15	C
ATOM 1723	CB	LYS	A	109	47.638	-12.559	3.644	1.00	55.47	C
ATOM 1726	CG	LYS	A	109	47.261	-13.758	2.850	1.00	58.35	C
ATOM 1729	CD	LYS	A	109	47.898	-15.038	3.348	1.00	64.60	C
ATOM 1732	CE	LYS	A	109	47.531	-16.247	2.344	1.00	68.67	C
ATOM 1735	NZ	LYS	A	109	48.322	-17.517	2.627	1.00	71.64	N
ATOM 1739	C	LYS	A	109	45.472	-11.376	3.326	1.00	51.57	C
ATOM 1740	O	LYS	A	109	45.043	-11.938	4.301	1.00	55.49	O
ATOM 1741	N	GLU	A	110	44.629	-10.868	2.482	1.00	48.33	N
ATOM 1743	CA	GLU	A	110	43.162	-10.946	2.841	1.00	47.27	C
ATOM 1745	CB	GLU	A	110	42.668	-12.235	3.564	1.00	48.52	C
ATOM 1748	CG	GLU	A	110	42.930	-13.571	2.828	1.00	52.86	C
ATOM 1751	CD	GLU	A	110	42.513	-14.864	3.570	1.00	55.78	C
ATOM 1752	OE1	GLU	A	110	41.488	-14.854	4.321	1.00	53.35	O
ATOM 1753	OE2	GLU	A	110	43.190	-15.927	3.337	1.00	63.72	O
ATOM 1754	C	GLU	A	110	42.519	-9.791	3.590	1.00	44.72	C
ATOM 1755	O	GLU	A	110	42.327	-9.843	4.769	1.00	44.16	O
ATOM 1756	N	LEU	A	111	42.058	-8.851	2.780	1.00	42.81	N
ATOM 1758	CA	LEU	A	111	41.322	-7.684	3.153	1.00	41.48	C
ATOM 1760	CB	LEU	A	111	42.164	-6.445	2.787	1.00	40.76	C
ATOM 1763	CG	LEU	A	111	41.578	-5.068	2.935	1.00	39.62	C
ATOM 1765	CD1	LEU	A	111	41.011	-4.863	4.331	1.00	41.72	C

ATOM 1769	CD2	LEU	A	111	42.691	-4.060	2.710	1.00	39.92	C
ATOM 1773	C	LEU	A	111	40.103	-7.645	2.272	1.00	41.38	C
ATOM 1774	O	LEU	A	111	40.014	-6.823	1.395	1.00	42.26	O
ATOM 1775	N	PRO	A	112	39.179	-8.521	2.525	1.00	41.64	N
ATOM 1776	CA	PRO	A	112	38.060	-8.786	1.640	1.00	42.53	C
ATOM 1778	CB	PRO	A	112	37.638	-10.175	2.115	1.00	44.60	C
ATOM 1781	CG	PRO	A	112	37.805	-10.066	3.588	1.00	43.64	C
ATOM 1784	CD	PRO	A	112	39.114	-9.318	3.760	1.00	43.26	C
ATOM 1787	C	PRO	A	112	36.845	-7.849	1.760	1.00	42.22	C
ATOM 1788	O	PRO	A	112	35.765	-8.273	2.247	1.00	43.92	O
ATOM 1789	N	MET	A	113	36.976	-6.650	1.225	1.00	41.57	N
ATOM 1791	CA	MET	A	113	35.973	-5.586	1.353	1.00	41.49	C
ATOM 1793	CB	MET	A	113	36.676	-4.230	1.468	1.00	40.58	C
ATOM 1796	CG	MET	A	113	37.824	-4.291	2.459	1.00	41.70	C
ATOM 1799	SD	MET	A	113	38.645	-2.730	2.961	1.00	44.40	S
ATOM 1800	CE	MET	A	113	38.085	-1.709	1.780	1.00	48.11	C
ATOM 1804	C	MET	A	113	35.088	-5.639	0.146	1.00	42.26	C
ATOM 1805	O	MET	A	113	35.080	-4.740	-0.708	1.00	42.73	O
ATOM 1806	N	ARG	A	114	34.344	-6.726	0.053	1.00	42.70	N
ATOM 1808	CA	ARG	A	114	33.513	-6.960	-1.108	1.00	43.40	C
ATOM 1810	CB	ARG	A	114	33.165	-8.423	-1.136	1.00	45.30	C
ATOM 1813	CG	ARG	A	114	32.163	-8.694	-0.123	1.00	48.87	C
ATOM 1816	CD	ARG	A	114	32.431	-9.967	0.498	1.00	54.37	C
ATOM 1819	NE	ARG	A	114	31.551	-10.186	1.603	1.00	56.34	N
ATOM 1821	CZ	ARG	A	114	31.514	-11.297	2.263	1.00	55.48	C
ATOM 1822	NH1	ARG	A	114	32.344	-12.304	1.982	1.00	51.37	N
ATOM 1825	NH2	ARG	A	114	30.674	-11.331	3.277	1.00	60.58	N
ATOM 1828	C	ARG	A	114	32.209	-6.193	-1.176	1.00	42.43	C
ATOM 1829	O	ARG	A	114	31.422	-6.405	-2.096	1.00	43.72	O
ATOM 1830	N	ASN	A	115	31.936	-5.385	-0.165	1.00	41.74	N
ATOM 1832	CA	ASN	A	115	30.800	-4.474	-0.183	1.00	42.25	C
ATOM 1834	CB	ASN	A	115	29.944	-4.676	1.039	1.00	43.29	C
ATOM 1837	CG	ASN	A	115	29.106	-5.845	0.914	1.00	44.56	C
ATOM 1838	OD1	ASN	A	115	28.419	-6.041	-0.040	1.00	47.36	O
ATOM 1839	ND2	ASN	A	115	29.181	-6.668	1.865	1.00	52.65	N
ATOM 1842	C	ASN	A	115	31.177	-3.013	-0.329	1.00	40.39	C
ATOM 1843	O	ASN	A	115	30.332	-2.226	-0.638	1.00	41.23	O
ATOM 1844	N	LEU	A	116	32.440	-2.683	-0.159	1.00	38.95	N
ATOM 1846	CA	LEU	A	116	32.917	-1.357	-0.384	1.00	39.18	C
ATOM 1848	CB	LEU	A	116	34.415	-1.245	-0.029	1.00	37.99	C
ATOM 1851	CG	LEU	A	116	34.961	0.166	-0.304	1.00	38.33	C
ATOM 1853	CD1	LEU	A	116	34.239	1.149	0.563	1.00	39.42	C
ATOM 1857	CD2	LEU	A	116	36.421	0.263	-0.035	1.00	38.20	C
ATOM 1861	C	LEU	A	116	32.611	-0.853	-1.839	1.00	40.77	C
ATOM 1862	O	LEU	A	116	33.220	-1.240	-2.811	1.00	41.13	O
ATOM 1863	N	GLN	A	117	31.641	0.020	-1.950	1.00	41.94	N
ATOM 1865	CA	GLN	A	117	31.185	0.433	-3.228	1.00	44.45	C
ATOM 1867	CB	GLN	A	117	29.790	-0.099	-3.459	1.00	46.41	C
ATOM 1870	CG	GLN	A	117	29.915	-1.437	-4.132	1.00	50.06	C
ATOM 1873	CD	GLN	A	117	28.659	-2.188	-4.162	1.00	54.73	C
ATOM 1874	OE1	GLN	A	117	27.898	-2.178	-3.185	1.00	56.09	O
ATOM 1875	NE2	GLN	A	117	28.436	-2.883	-5.252	1.00	56.36	N
ATOM 1878	C	GLN	A	117	31.319	1.908	-3.539	1.00	44.91	C
ATOM 1879	O	GLN	A	117	31.561	2.178	-4.686	1.00	47.48	O
ATOM 1880	N	GLU	A	118	31.246	2.824	-2.567	1.00	43.90	N
ATOM 1882	CA	GLU	A	118	31.630	4.203	-2.827	1.00	44.87	C
ATOM 1884	CB	GLU	A	118	30.338	5.058	-3.007	1.00	48.13	C
ATOM 1887	CG	GLU	A	118	30.326	6.583	-3.040	1.00	50.77	C
ATOM 1890	CD	GLU	A	118	30.632	7.244	-4.365	1.00	56.86	C
ATOM 1891	OE1	GLU	A	118	31.202	6.589	-5.234	1.00	65.98	O
ATOM 1892	OE2	GLU	A	118	30.462	8.468	-4.540	1.00	58.62	O
ATOM 1893	C	GLU	A	118	32.606	4.742	-1.785	1.00	42.40	C
ATOM 1894	O	GLU	A	118	32.534	4.414	-0.641	1.00	40.40	O
ATOM 1895	N	ILE	A	119	33.550	5.555	-2.272	1.00	42.58	N
ATOM 1897	CA	ILE	A	119	34.382	6.462	-1.481	1.00	41.49	C
ATOM 1899	CB	ILE	A	119	35.884	6.155	-1.688	1.00	40.87	C
ATOM 1901	CG1	ILE	A	119	36.283	4.839	-1.043	1.00	40.15	C
ATOM 1904	CD1	ILE	A	119	37.837	4.504	-1.293	1.00	40.31	C

ATOM 1908	CG2	ILE	A	119	36.808	7.251	-1.096	1.00	40.44	C
ATOM 1912	C	ILE	A	119	34.012	7.873	-1.961	1.00	41.94	C
ATOM 1913	O	ILE	A	119	34.441	8.325	-3.039	1.00	44.53	O
ATOM 1914	N	LEU	A	120	33.182	8.572	-1.200	1.00	42.54	N
ATOM 1916	CA	LEU	A	120	32.619	9.831	-1.705	1.00	46.08	C
ATOM 1918	CB	LEU	A	120	31.798	10.529	-0.657	1.00	47.62	C
ATOM 1921	CG	LEU	A	120	30.428	10.004	-0.329	1.00	50.88	C
ATOM 1923	CD1	LEU	A	120	29.763	11.116	0.529	1.00	54.37	C
ATOM 1927	CD2	LEU	A	120	29.652	9.701	-1.610	1.00	50.49	C
ATOM 1931	C	LEU	A	120	33.658	10.830	-2.141	1.00	46.27	C
ATOM 1932	O	LEU	A	120	33.462	11.522	-3.112	1.00	48.50	O
ATOM 1933	N	HIS	A	121	34.737	10.906	-1.361	1.00	45.34	N
ATOM 1935	CA	HIS	A	121	35.891	11.734	-1.632	1.00	45.38	C
ATOM 1937	CB	HIS	A	121	35.889	12.961	-0.796	1.00	47.60	C
ATOM 1940	CG	HIS	A	121	34.582	13.616	-0.646	1.00	47.72	C
ATOM 1941	ND1	HIS	A	121	34.347	14.891	-1.097	1.00	49.72	N
ATOM 1943	CE1	HIS	A	121	33.129	15.251	-0.758	1.00	50.90	C
ATOM 1945	NE2	HIS	A	121	32.577	14.277	-0.081	1.00	49.78	N
ATOM 1947	CD2	HIS	A	121	33.480	13.248	0.038	1.00	47.09	C
ATOM 1949	C	HIS	A	121	37.208	11.131	-1.263	1.00	44.24	C
ATOM 1950	O	HIS	A	121	37.331	10.470	-0.247	1.00	43.40	O
ATOM 1951	N	GLY	A	122	38.215	11.496	-2.036	1.00	46.45	N
ATOM 1953	CA	GLY	A	122	39.568	11.184	-1.687	1.00	46.38	C
ATOM 1956	C	GLY	A	122	40.066	10.056	-2.530	1.00	46.66	C
ATOM 1957	O	GLY	A	122	39.309	9.308	-3.132	1.00	44.50	O
ATOM 1958	N	ALA	A	123	41.369	9.924	-2.491	1.00	47.30	N
ATOM 1960	CA	ALA	A	123	42.029	8.889	-3.172	1.00	47.38	C
ATOM 1962	CB	ALA	A	123	43.273	9.481	-3.863	1.00	49.98	C
ATOM 1966	C	ALA	A	123	42.350	7.675	-2.244	1.00	44.62	C
ATOM 1967	O	ALA	A	123	41.818	7.512	-1.158	1.00	43.85	O
ATOM 1968	N	VAL	A	124	43.114	6.733	-2.791	1.00	45.41	N
ATOM 1970	CA	VAL	A	124	43.423	5.507	-2.138	1.00	43.66	C
ATOM 1972	CB	VAL	A	124	42.721	4.412	-2.827	1.00	42.78	C
ATOM 1974	CG1	VAL	A	124	43.053	3.093	-2.159	1.00	44.72	C
ATOM 1978	CG2	VAL	A	124	41.231	4.593	-2.655	1.00	42.04	C
ATOM 1982	C	VAL	A	124	44.902	5.256	-2.142	1.00	44.48	C
ATOM 1983	O	VAL	A	124	45.611	5.612	-3.083	1.00	46.68	O
ATOM 1984	N	ARG	A	125	45.391	4.622	-1.099	1.00	43.14	N
ATOM 1986	CA	ARG	A	125	46.761	4.216	-1.137	1.00	44.94	C
ATOM 1988	CB	ARG	A	125	47.589	5.115	-0.277	1.00	47.27	C
ATOM 1991	CG	ARG	A	125	49.029	4.742	-0.264	1.00	51.74	C
ATOM 1994	CD	ARG	A	125	49.897	5.906	0.139	1.00	57.79	C
ATOM 1997	NE	ARG	A	125	51.268	5.694	-0.336	1.00	64.37	N
ATOM 1999	CZ	ARG	A	125	52.378	5.749	0.419	1.00	67.82	C
ATOM 2000	NH1	ARG	A	125	52.312	6.066	1.746	1.00	67.17	N
ATOM 2003	NH2	ARG	A	125	53.565	5.492	-0.178	1.00	68.87	N
ATOM 2006	C	ARG	A	125	46.936	2.808	-0.655	1.00	43.08	C
ATOM 2007	O	ARG	A	125	46.596	2.460	0.469	1.00	39.00	O
ATOM 2008	N	PHE	A	126	47.508	2.011	-1.552	1.00	44.38	N
ATOM 2010	CA	PHE	A	126	48.137	0.783	-1.167	1.00	44.03	C
ATOM 2012	CB	PHE	A	126	47.510	-0.344	-1.926	1.00	43.71	C
ATOM 2015	CG	PHE	A	126	46.218	-0.807	-1.391	1.00	40.01	C
ATOM 2016	CD1	PHE	A	126	45.108	-0.080	-1.549	1.00	40.92	C
ATOM 2018	CE1	PHE	A	126	43.887	-0.550	-1.063	1.00	39.27	C
ATOM 2020	CZ	PHE	A	126	43.775	-1.763	-0.456	1.00	38.94	C
ATOM 2022	CE2	PHE	A	126	44.833	-2.509	-0.371	1.00	42.57	C
ATOM 2024	CD2	PHE	A	126	46.088	-2.034	-0.854	1.00	42.75	C
ATOM 2026	C	PHE	A	126	49.648	0.852	-1.465	1.00	46.82	C
ATOM 2027	O	PHE	A	126	50.036	1.090	-2.614	1.00	47.64	O
ATOM 2028	N	SER	A	127	50.476	0.631	-0.423	1.00	47.70	N
ATOM 2030	CA	SER	A	127	51.910	0.385	-0.566	1.00	51.19	C
ATOM 2032	CB	SER	A	127	52.649	1.696	-0.466	1.00	54.02	C
ATOM 2035	OG	SER	A	127	53.034	1.883	0.885	1.00	57.27	O
ATOM 2037	C	SER	A	127	52.481	-0.594	0.485	1.00	51.56	C
ATOM 2038	O	SER	A	127	52.047	-0.628	1.604	1.00	49.36	O
ATOM 2039	N	ASN	A	128	53.468	-1.391	0.078	1.00	54.77	N
ATOM 2041	CA	ASN	A	128	54.264	-2.229	0.968	1.00	56.21	C
ATOM 2043	CB	ASN	A	128	55.137	-1.373	1.877	1.00	58.23	C

ATOM	2046	CG	ASN	A	128	56.046	-0.407	1.097	1.00	62.17	C
ATOM	2047	OD1	ASN	A	128	57.182	-0.758	0.790	1.00	66.14	O
ATOM	2048	ND2	ASN	A	128	55.556	0.817	0.799	1.00	58.01	N
ATOM	2051	C	ASN	A	128	53.402	-3.228	1.755	1.00	54.35	C
ATOM	2052	O	ASN	A	128	53.461	-3.340	2.990	1.00	53.42	O
ATOM	2053	N	ASN	A	129	52.624	-3.990	0.999	1.00	53.03	N
ATOM	2055	CA	ASN	A	129	51.809	-5.034	1.562	1.00	51.72	C
ATOM	2057	CB	ASN	A	129	50.355	-4.712	1.281	1.00	48.91	C
ATOM	2060	CG	ASN	A	129	49.950	-3.386	1.877	1.00	48.71	C
ATOM	2061	OD1	ASN	A	129	49.956	-3.219	3.097	1.00	46.84	O
ATOM	2062	ND2	ASN	A	129	49.620	-2.425	1.021	1.00	49.70	N
ATOM	2065	C	ASN	A	129	52.142	-6.394	0.988	1.00	53.27	C
ATOM	2066	O	ASN	A	129	51.301	-6.990	0.376	1.00	52.88	O
ATOM	2067	N	PRO	A	130	53.322	-6.931	1.248	1.00	55.86	N
ATOM	2068	CA	PRO	A	130	53.849	-8.030	0.441	1.00	58.30	C
ATOM	2070	CB	PRO	A	130	55.334	-8.067	0.806	1.00	61.57	C
ATOM	2073	CG	PRO	A	130	55.422	-7.439	2.170	1.00	61.58	C
ATOM	2076	CD	PRO	A	130	54.194	-6.614	2.386	1.00	57.72	C
ATOM	2079	C	PRO	A	130	53.194	-9.378	0.718	1.00	58.29	C
ATOM	2080	O	PRO	A	130	53.617	-10.382	0.197	1.00	60.97	O
ATOM	2081	N	ALA	A	131	52.151	-9.438	1.513	1.00	55.73	N
ATOM	2083	CA	ALA	A	131	51.452	-10.692	1.621	1.00	54.80	C
ATOM	2085	CB	ALA	A	131	51.407	-11.073	3.006	1.00	54.50	C
ATOM	2089	C	ALA	A	131	50.056	-10.559	1.046	1.00	52.04	C
ATOM	2090	O	ALA	A	131	49.305	-11.499	1.010	1.00	52.22	O
ATOM	2091	N	LEU	A	132	49.731	-9.399	0.527	1.00	50.22	N
ATOM	2093	CA	LEU	A	132	48.347	-9.100	0.235	1.00	48.25	C
ATOM	2095	CB	LEU	A	132	48.111	-7.577	0.094	1.00	46.58	C
ATOM	2098	CG	LEU	A	132	46.693	-7.049	-0.140	1.00	42.72	C
ATOM	2100	CD1	LEU	A	132	45.792	-7.428	0.981	1.00	41.93	C
ATOM	2104	CD2	LEU	A	132	46.701	-5.522	-0.330	1.00	41.41	C
ATOM	2108	C	LEU	A	132	47.923	-9.826	-1.003	1.00	49.53	C
ATOM	2109	O	LEU	A	132	48.735	-10.093	-1.883	1.00	51.28	O
ATOM	2110	N	CYS	A	133	46.636	-10.148	-1.031	1.00	49.32	N
ATOM	2112	CA	CYS	A	133	46.017	-10.944	-2.085	1.00	51.07	C
ATOM	2114	CB	CYS	A	133	45.605	-12.286	-1.533	1.00	51.93	C
ATOM	2117	SG	CYS	A	133	47.113	-13.311	-1.525	1.00	58.93	S
ATOM	2118	C	CYS	A	133	44.814	-10.287	-2.732	1.00	49.03	C
ATOM	2119	O	CYS	A	133	44.089	-9.538	-2.070	1.00	47.78	O
ATOM	2120	N	ASN	A	134	44.660	-10.569	-4.026	1.00	48.89	N
ATOM	2122	CA	ASN	A	134	43.496	-10.312	-4.800	1.00	47.55	C
ATOM	2124	CB	ASN	A	134	42.304	-11.082	-4.237	1.00	46.96	C
ATOM	2127	CG	ASN	A	134	42.563	-12.593	-4.084	1.00	49.52	C
ATOM	2128	OD1	ASN	A	134	42.816	-13.265	-5.038	1.00	51.07	O
ATOM	2129	ND2	ASN	A	134	42.457	-13.112	-2.870	1.00	48.52	N
ATOM	2132	C	ASN	A	134	43.169	-8.832	-5.039	1.00	45.92	C
ATOM	2133	O	ASN	A	134	42.597	-8.494	-6.061	1.00	45.65	O
ATOM	2134	N	VAL	A	135	43.530	-7.933	-4.135	1.00	45.56	N
ATOM	2136	CA	VAL	A	135	42.985	-6.552	-4.156	1.00	43.82	C
ATOM	2138	CB	VAL	A	135	43.400	-5.780	-2.932	1.00	42.47	C
ATOM	2140	CG1	VAL	A	135	43.037	-4.266	-3.017	1.00	41.77	C
ATOM	2144	CG2	VAL	A	135	42.786	-6.384	-1.737	1.00	41.35	C
ATOM	2148	C	VAL	A	135	43.493	-5.880	-5.431	1.00	45.40	C
ATOM	2149	O	VAL	A	135	42.723	-5.205	-6.070	1.00	45.40	O
ATOM	2150	N	GLU	A	136	44.755	-6.158	-5.796	1.00	46.87	N
ATOM	2152	CA	GLU	A	136	45.404	-5.750	-7.035	1.00	49.44	C
ATOM	2154	CB	GLU	A	136	46.677	-6.586	-7.316	1.00	52.90	C
ATOM	2157	CG	GLU	A	136	47.654	-6.085	-8.413	1.00	57.64	C
ATOM	2160	CD	GLU	A	136	48.784	-7.097	-8.714	1.00	66.03	C
ATOM	2161	OE1	GLU	A	136	49.015	-7.981	-7.798	1.00	68.30	O
ATOM	2162	OE2	GLU	A	136	49.415	-7.041	-9.837	1.00	70.61	O
ATOM	2163	C	GLU	A	136	44.526	-5.895	-8.238	1.00	50.26	C
ATOM	2164	O	GLU	A	136	44.781	-5.226	-9.234	1.00	52.27	O
ATOM	2165	N	SER	A	137	43.516	-6.745	-8.189	1.00	49.34	N
ATOM	2167	CA	SER	A	137	42.673	-6.934	-9.365	1.00	51.02	C
ATOM	2169	CB	SER	A	137	42.120	-8.342	-9.390	1.00	51.77	C
ATOM	2172	OG	SER	A	137	41.372	-8.537	-8.213	1.00	49.79	O
ATOM	2174	C	SER	A	137	41.521	-5.953	-9.408	1.00	49.35	C

ATOM	2175	O	SER	A	137	40.737	-5.909	-10.335	1.00	50.09	O
ATOM	2176	N	ILE	A	138	41.427	-5.128	-8.420	1.00	47.68	N
ATOM	2178	CA	ILE	A	138	40.207	-4.429	-8.272	1.00	47.46	C
ATOM	2180	CB	ILE	A	138	39.947	-4.236	-6.830	1.00	45.92	C
ATOM	2182	CG1	ILE	A	138	39.161	-5.479	-6.402	1.00	50.04	C
ATOM	2185	CD1	ILE	A	138	38.907	-5.482	-4.979	1.00	52.31	C
ATOM	2189	CG2	ILE	A	138	39.130	-3.036	-6.535	1.00	44.29	C
ATOM	2193	C	ILE	A	138	40.270	-3.168	-9.014	1.00	48.13	C
ATOM	2194	O	ILE	A	138	41.305	-2.535	-9.060	1.00	49.23	O
ATOM	2195	N	GLN	A	139	39.110	-2.834	-9.567	1.00	48.49	N
ATOM	2197	CA	GLN	A	139	38.826	-1.708	-10.439	1.00	48.81	C
ATOM	2199	CB	GLN	A	139	37.724	-2.104	-11.446	1.00	50.08	C
ATOM	2202	CG	GLN	A	139	38.234	-3.051	-12.588	1.00	52.30	C
ATOM	2205	CD	GLN	A	139	37.175	-3.535	-13.588	1.00	54.29	C
ATOM	2206	OE1	GLN	A	139	36.906	-2.864	-14.560	1.00	59.63	O
ATOM	2207	NE2	GLN	A	139	36.617	-4.708	-13.361	1.00	52.60	N
ATOM	2210	C	GLN	A	139	38.326	-0.553	-9.603	1.00	48.02	C
ATOM	2211	O	GLN	A	139	37.130	-0.409	-9.361	1.00	48.86	O
ATOM	2212	N	TRP	A	140	39.238	0.279	-9.138	1.00	47.32	N
ATOM	2214	CA	TRP	A	140	38.876	1.416	-8.309	1.00	45.95	C
ATOM	2216	CB	TRP	A	140	40.180	2.000	-7.785	1.00	46.14	C
ATOM	2219	CG	TRP	A	140	40.885	0.963	-6.994	1.00	46.00	C
ATOM	2220	CD1	TRP	A	140	41.802	0.118	-7.451	1.00	49.63	C
ATOM	2222	NE1	TRP	A	140	42.183	-0.754	-6.450	1.00	52.24	N
ATOM	2224	CE2	TRP	A	140	41.481	-0.469	-5.318	1.00	45.13	C
ATOM	2225	CD2	TRP	A	140	40.644	0.601	-5.619	1.00	46.06	C
ATOM	2226	CE3	TRP	A	140	39.843	1.122	-4.603	1.00	47.07	C
ATOM	2228	CZ3	TRP	A	140	39.902	0.531	-3.331	1.00	46.32	C
ATOM	2230	CH2	TRP	A	140	40.751	-0.540	-3.099	1.00	44.90	C
ATOM	2232	CZ2	TRP	A	140	41.559	-1.032	-4.085	1.00	44.06	C
ATOM	2234	C	TRP	A	140	37.958	2.468	-8.988	1.00	46.64	C
ATOM	2235	O	TRP	A	140	37.156	3.152	-8.417	1.00	47.16	O
ATOM	2236	N	ARG	A	141	38.039	2.549	-10.251	1.00	49.56	N
ATOM	2238	CA	ARG	A	141	37.281	3.487	-11.006	1.00	51.70	C
ATOM	2240	CB	ARG	A	141	37.690	3.287	-12.479	1.00	54.96	C
ATOM	2243	CG	ARG	A	141	37.314	4.259	-13.453	1.00	59.89	C
ATOM	2246	CD	ARG	A	141	37.332	3.683	-14.883	1.00	68.80	C
ATOM	2249	NE	ARG	A	141	36.925	4.702	-15.900	1.00	76.88	N
ATOM	2251	CZ	ARG	A	141	36.168	4.420	-16.981	1.00	79.58	C
ATOM	2252	NH1	ARG	A	141	35.680	3.165	-17.156	1.00	77.54	N
ATOM	2255	NH2	ARG	A	141	35.910	5.388	-17.889	1.00	83.87	N
ATOM	2258	C	ARG	A	141	35.805	3.315	-10.714	1.00	51.04	C
ATOM	2259	O	ARG	A	141	35.077	4.284	-10.763	1.00	52.62	O
ATOM	2260	N	ASP	A	142	35.337	2.129	-10.354	1.00	50.38	N
ATOM	2262	CA	ASP	A	142	33.936	2.014	-9.928	1.00	50.96	C
ATOM	2264	CB	ASP	A	142	33.502	0.590	-9.927	1.00	51.24	C
ATOM	2267	CG	ASP	A	142	32.027	0.437	-9.613	1.00	56.27	C
ATOM	2268	OD1	ASP	A	142	31.590	0.872	-8.537	1.00	64.27	O
ATOM	2269	OD2	ASP	A	142	31.195	-0.113	-10.333	1.00	62.04	O
ATOM	2270	C	ASP	A	142	33.730	2.575	-8.491	1.00	48.89	C
ATOM	2271	O	ASP	A	142	32.639	3.015	-8.113	1.00	47.96	O
ATOM	2272	N	ILE	A	143	34.781	2.510	-7.685	1.00	47.20	N
ATOM	2274	CA	ILE	A	143	34.745	2.956	-6.294	1.00	44.55	C
ATOM	2276	CB	ILE	A	143	35.712	2.142	-5.533	1.00	42.17	C
ATOM	2278	CG1	ILE	A	143	35.086	0.768	-5.327	1.00	40.78	C
ATOM	2281	CD1	ILE	A	143	36.133	-0.301	-5.046	1.00	40.44	C
ATOM	2285	CG2	ILE	A	143	36.018	2.787	-4.247	1.00	41.34	C
ATOM	2289	C	ILE	A	143	35.044	4.401	-6.069	1.00	44.56	C
ATOM	2290	O	ILE	A	143	34.327	5.095	-5.380	1.00	44.62	O
ATOM	2291	N	VAL	A	144	36.124	4.863	-6.630	1.00	45.00	N
ATOM	2293	CA	VAL	A	144	36.509	6.218	-6.403	1.00	45.50	C
ATOM	2295	CB	VAL	A	144	38.028	6.287	-6.507	1.00	45.97	C
ATOM	2297	CG1	VAL	A	144	38.574	7.708	-6.491	1.00	48.38	C
ATOM	2301	CG2	VAL	A	144	38.596	5.619	-5.328	1.00	43.75	C
ATOM	2305	C	VAL	A	144	35.797	7.249	-7.293	1.00	48.79	C
ATOM	2306	O	VAL	A	144	35.338	7.047	-8.422	1.00	49.84	O
ATOM	2307	N	SER	A	145	35.723	8.445	-6.763	1.00	51.81	N
ATOM	2309	CA	SER	A	145	35.288	9.568	-7.616	1.00	54.78	C

ATOM	2311	CB	SER	A	145	34.926	10.760	-6.750	1.00	54.47	C
ATOM	2314	OG	SER	A	145	34.427	11.741	-7.626	1.00	59.24	O
ATOM	2316	C	SER	A	145	36.287	9.966	-8.735	1.00	56.23	C
ATOM	2317	O	SER	A	145	37.469	10.176	-8.515	1.00	55.05	O
ATOM	2318	N	SER	A	146	35.814	10.152	-9.935	1.00	58.67	N
ATOM	2320	CA	SER	A	146	36.764	10.567	-10.927	1.00	61.98	C
ATOM	2322	CB	SER	A	146	36.061	10.701	-12.244	1.00	65.22	C
ATOM	2325	OG	SER	A	146	35.229	11.815	-12.148	1.00	69.73	O
ATOM	2327	C	SER	A	146	37.586	11.851	-10.591	1.00	63.73	C
ATOM	2328	O	SER	A	146	38.718	12.001	-11.061	1.00	66.06	O
ATOM	2329	N	ASP	A	147	37.110	12.782	-9.776	1.00	63.35	N
ATOM	2331	CA	ASP	A	147	38.047	13.855	-9.448	1.00	64.51	C
ATOM	2333	CB	ASP	A	147	37.388	14.938	-8.643	1.00	65.88	C
ATOM	2336	CG	ASP	A	147	36.191	15.484	-9.315	1.00	70.56	C
ATOM	2337	OD1	ASP	A	147	36.324	15.944	-10.449	1.00	76.86	O
ATOM	2338	OD2	ASP	A	147	35.062	15.475	-8.799	1.00	74.60	O
ATOM	2339	C	ASP	A	147	39.320	13.451	-8.694	1.00	61.87	C
ATOM	2340	O	ASP	A	147	40.181	14.271	-8.574	1.00	64.00	O
ATOM	2341	N	PHE	A	148	39.443	12.235	-8.160	1.00	58.00	N
ATOM	2343	CA	PHE	A	148	40.589	11.831	-7.323	1.00	55.65	C
ATOM	2345	CB	PHE	A	148	40.100	11.392	-5.912	1.00	52.67	C
ATOM	2348	CG	PHE	A	148	39.418	12.463	-5.124	1.00	52.51	C
ATOM	2349	CD1	PHE	A	148	38.059	12.760	-5.313	1.00	55.87	C
ATOM	2351	CE1	PHE	A	148	37.408	13.812	-4.627	1.00	53.04	C
ATOM	2353	CZ	PHE	A	148	38.100	14.471	-3.764	1.00	53.77	C
ATOM	2355	CE2	PHE	A	148	39.466	14.202	-3.553	1.00	50.27	C
ATOM	2357	CD2	PHE	A	148	40.105	13.203	-4.221	1.00	53.15	C
ATOM	2359	C	PHE	A	148	41.411	10.674	-7.958	1.00	55.84	C
ATOM	2360	O	PHE	A	148	42.390	10.172	-7.375	1.00	54.76	O
ATOM	2361	N	LEU	A	149	40.992	10.208	-9.141	1.00	57.46	N
ATOM	2363	CA	LEU	A	149	41.756	9.207	-9.902	1.00	57.20	C
ATOM	2365	CB	LEU	A	149	41.124	8.951	-11.285	1.00	58.59	C
ATOM	2368	CG	LEU	A	149	39.781	8.163	-11.362	1.00	57.42	C
ATOM	2370	CD1	LEU	A	149	39.542	7.556	-12.713	1.00	59.65	C
ATOM	2374	CD2	LEU	A	149	39.590	7.015	-10.313	1.00	54.35	C
ATOM	2378	C	LEU	A	149	43.154	9.743	-10.028	1.00	59.44	C
ATOM	2379	O	LEU	A	149	44.122	9.110	-9.706	1.00	57.88	O
ATOM	2380	N	SER	A	150	43.237	10.997	-10.427	1.00	63.31	N
ATOM	2382	CA	SER	A	150	44.517	11.658	-10.439	1.00	65.95	C
ATOM	2384	CB	SER	A	150	44.345	13.107	-10.848	1.00	69.04	C
ATOM	2387	OG	SER	A	150	44.468	13.155	-12.260	1.00	74.02	O
ATOM	2389	C	SER	A	150	45.359	11.553	-9.165	1.00	64.15	C
ATOM	2390	O	SER	A	150	46.550	11.630	-9.276	1.00	66.94	O
ATOM	2391	N	ASN	A	151	44.802	11.413	-7.962	1.00	60.55	N
ATOM	2393	CA	ASN	A	151	45.676	11.373	-6.785	1.00	59.05	C
ATOM	2395	CB	ASN	A	151	45.280	12.526	-5.824	1.00	58.72	C
ATOM	2398	CG	ASN	A	151	45.979	13.869	-6.202	1.00	65.21	C
ATOM	2399	OD1	ASN	A	151	45.616	14.591	-7.128	1.00	66.28	O
ATOM	2400	ND2	ASN	A	151	47.026	14.157	-5.506	1.00	72.90	N
ATOM	2403	C	ASN	A	151	45.879	9.943	-6.181	1.00	55.44	C
ATOM	2404	O	ASN	A	151	46.471	9.774	-5.128	1.00	53.43	O
ATOM	2405	N	MET	A	152	45.499	8.901	-6.932	1.00	54.65	N
ATOM	2407	CA	MET	A	152	45.653	7.496	-6.467	1.00	52.66	C
ATOM	2409	CB	MET	A	152	44.910	6.533	-7.366	1.00	51.86	C
ATOM	2412	CG	MET	A	152	43.443	6.813	-7.552	1.00	52.03	C
ATOM	2415	SD	MET	A	152	42.338	6.049	-6.388	1.00	50.06	S
ATOM	2416	CE	MET	A	152	42.743	4.273	-6.557	1.00	48.82	C
ATOM	2420	C	MET	A	152	47.124	7.024	-6.371	1.00	54.06	C
ATOM	2421	O	MET	A	152	47.951	7.492	-7.134	1.00	56.68	O
ATOM	2422	N	SER	A	153	47.449	6.144	-5.399	1.00	52.56	N
ATOM	2424	CA	SER	A	153	48.828	5.589	-5.246	1.00	54.12	C
ATOM	2426	CB	SER	A	153	49.601	6.341	-4.187	1.00	54.43	C
ATOM	2429	OG	SER	A	153	50.968	6.247	-4.512	1.00	56.90	O
ATOM	2431	C	SER	A	153	48.953	4.069	-4.949	1.00	52.77	C
ATOM	2432	O	SER	A	153	49.268	3.659	-3.817	1.00	52.35	O
ATOM	2433	N	MET	A	154	48.749	3.276	-5.995	1.00	52.33	N
ATOM	2435	CA	MET	A	154	48.550	1.862	-5.893	1.00	50.75	C
ATOM	2437	CB	MET	A	154	47.455	1.440	-6.811	1.00	49.97	C

ATOM 2440	CG	MET	A	154	46.216	2.318	-6.656	1.00	50.89	C
ATOM 2443	SD	MET	A	154	45.282	1.929	-5.148	1.00	58.01	S
ATOM 2444	CE	MET	A	154	45.749	3.387	-4.448	1.00	57.15	C
ATOM 2448	C	MET	A	154	49.802	1.157	-6.255	1.00	52.92	C
ATOM 2449	O	MET	A	154	50.276	1.278	-7.330	1.00	54.18	O
ATOM 2450	N	ASP	A	155	50.346	0.414	-5.315	1.00	53.59	N
ATOM 2452	CA	ASP	A	155	51.559	-0.296	-5.564	1.00	57.73	C
ATOM 2454	CB	ASP	A	155	52.786	0.526	-5.195	1.00	60.70	C
ATOM 2457	CG	ASP	A	155	54.088	-0.300	-5.273	1.00	67.99	C
ATOM 2458	OD1	ASP	A	155	54.469	-0.830	-6.389	1.00	70.11	O
ATOM 2459	OD2	ASP	A	155	54.773	-0.487	-4.215	1.00	74.44	O
ATOM 2460	C	ASP	A	155	51.489	-1.670	-4.882	1.00	56.85	C
ATOM 2461	O	ASP	A	155	51.675	-1.845	-3.662	1.00	55.16	O
ATOM 2462	N	PHE	A	156	51.232	-2.651	-5.733	1.00	57.62	N
ATOM 2464	CA	PHE	A	156	50.904	-3.965	-5.298	1.00	57.25	C
ATOM 2466	CB	PHE	A	156	49.701	-4.410	-6.080	1.00	55.63	C
ATOM 2469	CG	PHE	A	156	48.424	-3.817	-5.645	1.00	51.82	C
ATOM 2470	CD1	PHE	A	156	47.824	-2.852	-6.408	1.00	48.57	C
ATOM 2472	CE1	PHE	A	156	46.643	-2.329	-6.067	1.00	48.09	C
ATOM 2474	CZ	PHE	A	156	46.005	-2.746	-4.921	1.00	49.29	C
ATOM 2476	CE2	PHE	A	156	46.573	-3.759	-4.128	1.00	49.85	C
ATOM 2478	CD2	PHE	A	156	47.775	-4.298	-4.513	1.00	51.25	C
ATOM 2480	C	PHE	A	156	52.031	-4.922	-5.663	1.00	62.02	C
ATOM 2481	O	PHE	A	156	52.258	-5.121	-6.862	1.00	65.96	O
ATOM 2482	N	GLN	A	157	52.711	-5.558	-4.693	1.00	63.64	N
ATOM 2484	CA	GLN	A	157	53.730	-6.585	-5.019	1.00	67.83	C
ATOM 2486	CB	GLN	A	157	55.158	-6.019	-5.121	1.00	71.20	C
ATOM 2489	CG	GLN	A	157	55.232	-4.741	-5.955	1.00	74.76	C
ATOM 2492	CD	GLN	A	157	56.512	-3.922	-5.738	1.00	81.43	C
ATOM 2493	OE1	GLN	A	157	57.596	-4.501	-5.524	1.00	84.93	O
ATOM 2494	NE2	GLN	A	157	56.394	-2.570	-5.832	1.00	80.80	N
ATOM 2497	C	GLN	A	157	53.694	-7.701	-3.995	1.00	67.85	C
ATOM 2498	O	GLN	A	157	54.239	-7.549	-2.884	1.00	68.89	O
ATOM 2499	N	ASN	A	158	53.049	-8.824	-4.343	1.00	67.34	N
ATOM 2501	CA	ASN	A	158	52.985	-9.931	-3.387	1.00	66.37	C
ATOM 2503	CB	ASN	A	158	51.748	-10.825	-3.573	1.00	65.25	C
ATOM 2506	CG	ASN	A	158	51.555	-11.805	-2.408	1.00	65.80	C
ATOM 2507	OD1	ASN	A	158	52.434	-12.615	-2.126	1.00	69.30	O
ATOM 2508	ND2	ASN	A	158	50.396	-11.749	-1.760	1.00	62.84	N
ATOM 2511	C	ASN	A	158	54.252	-10.683	-3.607	1.00	68.88	C
ATOM 2512	O	ASN	A	158	54.482	-11.075	-4.714	1.00	71.15	O
ATOM 2513	N	HIS	A	159	55.079	-10.768	-2.562	1.00	68.92	N
ATOM 2515	CA	HIS	A	159	56.367	-11.474	-2.511	1.00	72.75	C
ATOM 2517	CB	HIS	A	159	57.529	-10.454	-2.416	1.00	74.34	C
ATOM 2525	C	HIS	A	159	56.430	-12.503	-1.321	1.00	73.55	C
ATOM 2526	O	HIS	A	159	57.483	-13.106	-1.060	1.00	77.25	O
ATOM 2527	N	LEU	A	160	55.312	-12.726	-0.620	1.00	70.71	N
ATOM 2529	CA	LEU	A	160	55.300	-13.613	0.558	1.00	71.96	C
ATOM 2531	CB	LEU	A	160	54.955	-12.858	1.835	1.00	69.16	C
ATOM 2534	CG	LEU	A	160	56.170	-12.018	2.242	1.00	72.49	C
ATOM 2536	CD1	LEU	A	160	55.879	-11.038	3.417	1.00	70.29	C
ATOM 2540	CD2	LEU	A	160	57.406	-12.963	2.560	1.00	78.18	C
ATOM 2544	C	LEU	A	160	54.436	-14.860	0.466	1.00	72.80	C
ATOM 2545	O	LEU	A	160	54.715	-15.905	1.146	1.00	76.27	O
ATOM 2546	N	GLY	A	161	53.426	-14.830	-0.387	1.00	70.92	N
ATOM 2548	CA	GLY	A	161	52.682	-16.052	-0.588	1.00	71.53	C
ATOM 2551	C	GLY	A	161	52.337	-16.324	-2.010	1.00	72.10	C
ATOM 2552	O	GLY	A	161	52.925	-15.725	-2.936	1.00	73.91	O
ATOM 2553	N	SER	A	162	51.354	-17.218	-2.151	1.00	71.50	N
ATOM 2555	CA	SER	A	162	50.850	-17.612	-3.430	1.00	71.80	C
ATOM 2557	CB	SER	A	162	51.072	-19.072	-3.631	1.00	75.27	C
ATOM 2560	OG	SER	A	162	49.976	-19.671	-3.029	1.00	75.08	O
ATOM 2562	C	SER	A	162	49.382	-17.287	-3.697	1.00	68.40	C
ATOM 2563	O	SER	A	162	49.076	-17.118	-4.826	1.00	71.58	O
ATOM 2564	N	CYS	A	163	48.443	-17.195	-2.785	1.00	64.77	N
ATOM 2566	CA	CYS	A	163	47.190	-16.558	-3.248	1.00	62.32	C
ATOM 2568	CB	CYS	A	163	47.482	-15.350	-4.121	1.00	60.54	C
ATOM 2571	SG	CYS	A	163	48.195	-14.039	-3.164	1.00	65.07	S



ATOM	2572	C	CYS	A	163	46.203	-17.327	-4.092	1.00	62.09	C
ATOM	2573	O	CYS	A	163	46.486	-17.842	-5.125	1.00	64.63	O
ATOM	2574	N	GLN	A	164	44.966	-17.252	-3.712	1.00	59.87	N
ATOM	2576	CA	GLN	A	164	43.963	-17.875	-4.490	1.00	59.87	C
ATOM	2578	CB	GLN	A	164	42.775	-18.151	-3.577	1.00	58.78	C
ATOM	2581	CG	GLN	A	164	43.135	-19.114	-2.394	1.00	60.45	C
ATOM	2584	CD	GLN	A	164	42.289	-18.848	-1.173	1.00	58.32	C
ATOM	2585	OE1	GLN	A	164	41.246	-19.446	-1.065	1.00	62.19	O
ATOM	2586	NE2	GLN	A	164	42.706	-17.902	-0.272	1.00	60.77	N
ATOM	2589	C	GLN	A	164	43.615	-17.003	-5.717	1.00	58.68	C
ATOM	2590	O	GLN	A	164	44.054	-15.875	-5.910	1.00	55.31	O
ATOM	2591	N	LYS	A	165	42.840	-17.597	-6.587	1.00	60.41	N
ATOM	2593	CA	LYS	A	165	42.374	-16.938	-7.780	1.00	59.80	C
ATOM	2595	CB	LYS	A	165	42.587	-17.888	-8.966	1.00	63.00	C
ATOM	2598	CG	LYS	A	165	44.023	-18.081	-9.347	1.00	64.02	C
ATOM	2601	CD	LYS	A	165	44.046	-18.676	-10.685	1.00	70.24	C
ATOM	2604	CE	LYS	A	165	45.354	-19.359	-10.979	1.00	75.93	C
ATOM	2607	NZ	LYS	A	165	45.322	-20.005	-12.321	1.00	78.93	N
ATOM	2611	C	LYS	A	165	40.898	-16.505	-7.632	1.00	57.91	C
ATOM	2612	O	LYS	A	165	40.082	-17.115	-6.894	1.00	57.15	O
ATOM	2613	N	CYS	A	166	40.574	-15.429	-8.331	1.00	56.63	N
ATOM	2615	CA	CYS	A	166	39.229	-14.949	-8.421	1.00	56.14	C
ATOM	2617	CB	CYS	A	166	39.265	-13.725	-9.280	1.00	56.07	C
ATOM	2620	SG	CYS	A	166	39.966	-12.314	-8.384	1.00	60.17	S
ATOM	2621	C	CYS	A	166	38.278	-15.928	-9.059	1.00	58.20	C
ATOM	2622	O	CYS	A	166	38.612	-16.593	-9.993	1.00	60.87	O
ATOM	2623	N	ASP	A	167	37.054	-15.995	-8.604	1.00	58.01	N
ATOM	2625	CA	ASP	A	167	36.071	-16.803	-9.313	1.00	62.21	C
ATOM	2627	CB	ASP	A	167	34.731	-16.757	-8.577	1.00	61.75	C
ATOM	2630	CG	ASP	A	167	33.981	-18.042	-8.691	1.00	67.21	C
ATOM	2631	OD1	ASP	A	167	33.252	-18.146	-9.682	1.00	71.66	O
ATOM	2632	OD2	ASP	A	167	34.098	-19.030	-7.887	1.00	71.36	O
ATOM	2633	C	ASP	A	167	35.907	-16.370	-10.772	1.00	64.34	C
ATOM	2634	O	ASP	A	167	35.932	-15.189	-11.077	1.00	64.04	O
ATOM	2635	N	PRO	A	168	35.733	-17.276	-11.712	1.00	69.18	N
ATOM	2636	CA	PRO	A	168	35.529	-16.843	-13.117	1.00	71.67	C
ATOM	2638	CB	PRO	A	168	35.482	-18.135	-13.880	1.00	75.31	C
ATOM	2641	CG	PRO	A	168	34.937	-19.094	-12.867	1.00	75.75	C
ATOM	2644	CD	PRO	A	168	35.648	-18.736	-11.577	1.00	72.39	C
ATOM	2647	C	PRO	A	168	34.190	-16.113	-13.277	1.00	72.13	C
ATOM	2648	O	PRO	A	168	33.980	-15.434	-14.273	1.00	74.17	O
ATOM	2649	N	SER	A	169	33.333	-16.243	-12.263	1.00	70.78	N
ATOM	2651	CA	SER	A	169	32.029	-15.649	-12.196	1.00	70.36	C
ATOM	2653	CB	SER	A	169	31.448	-16.185	-10.906	1.00	69.09	C
ATOM	2656	OG	SER	A	169	30.162	-15.740	-10.627	1.00	69.59	O
ATOM	2658	C	SER	A	169	32.176	-14.099	-12.189	1.00	68.96	C
ATOM	2659	O	SER	A	169	31.369	-13.354	-12.767	1.00	69.80	O
ATOM	2660	N	CYS	A	170	33.235	-13.645	-11.522	1.00	66.34	N
ATOM	2662	CA	CYS	A	170	33.585	-12.257	-11.389	1.00	64.17	C
ATOM	2664	CB	CYS	A	170	35.009	-12.194	-10.803	1.00	62.64	C
ATOM	2667	SG	CYS	A	170	35.099	-12.706	-9.064	1.00	65.28	S
ATOM	2668	C	CYS	A	170	33.626	-11.532	-12.691	1.00	64.97	C
ATOM	2669	O	CYS	A	170	34.036	-12.154	-13.644	1.00	67.60	O
ATOM	2670	N	PRO	A	171	33.293	-10.224	-12.709	1.00	63.33	N
ATOM	2671	CA	PRO	A	171	33.587	-9.309	-13.840	1.00	63.95	C
ATOM	2673	CB	PRO	A	171	32.709	-8.083	-13.545	1.00	62.43	C
ATOM	2676	CG	PRO	A	171	32.618	-8.081	-12.137	1.00	60.40	C
ATOM	2679	CD	PRO	A	171	32.609	-9.504	-11.624	1.00	60.72	C
ATOM	2682	C	PRO	A	171	35.056	-8.844	-13.952	1.00	62.28	C
ATOM	2683	O	PRO	A	171	35.613	-8.339	-12.977	1.00	58.36	O
ATOM	2684	N	ASN	A	172	35.651	-9.053	-15.137	1.00	64.60	N
ATOM	2686	CA	ASN	A	172	37.014	-8.626	-15.469	1.00	64.03	C
ATOM	2688	CB	ASN	A	172	37.092	-7.107	-15.494	1.00	63.31	C
ATOM	2691	CG	ASN	A	172	36.067	-6.493	-16.417	1.00	64.86	C
ATOM	2692	OD1	ASN	A	172	36.063	-6.769	-17.588	1.00	68.52	O
ATOM	2693	ND2	ASN	A	172	35.183	-5.689	-15.884	1.00	63.98	N
ATOM	2696	C	ASN	A	172	38.072	-9.188	-14.525	1.00	62.11	C
ATOM	2697	O	ASN	A	172	39.141	-8.611	-14.391	1.00	60.44	O

ATOM	2698	N	GLY	A	173	37.760	-10.330	-13.891	1.00	61.90	N
ATOM	2700	CA	GLY	A	173	38.676	-11.067	-13.029	1.00	60.44	C
ATOM	2703	C	GLY	A	173	38.962	-10.365	-11.733	1.00	56.68	C
ATOM	2704	O	GLY	A	173	39.958	-10.665	-11.056	1.00	54.88	O
ATOM	2705	N	SER	A	174	38.081	-9.436	-11.392	1.00	54.92	N
ATOM	2707	CA	SER	A	174	38.350	-8.556	-10.289	1.00	53.27	C
ATOM	2709	CB	SER	A	174	38.094	-7.084	-10.657	1.00	54.14	C
ATOM	2712	OG	SER	A	174	37.408	-6.922	-11.890	1.00	61.12	O
ATOM	2714	C	SER	A	174	37.560	-8.949	-9.069	1.00	51.33	C
ATOM	2715	O	SER	A	174	36.354	-9.118	-9.128	1.00	51.96	O
ATOM	2716	N	CYS	A	175	38.277	-9.140	-7.965	1.00	50.14	N
ATOM	2718	CA	CYS	A	175	37.716	-9.660	-6.724	1.00	49.06	C
ATOM	2720	CB	CYS	A	175	37.668	-11.161	-6.785	1.00	51.08	C
ATOM	2723	SG	CYS	A	175	39.237	-11.989	-6.497	1.00	54.98	S
ATOM	2724	C	CYS	A	175	38.552	-9.228	-5.541	1.00	46.28	C
ATOM	2725	O	CYS	A	175	39.663	-8.727	-5.713	1.00	45.60	O
ATOM	2726	N	TRP	A	176	38.009	-9.415	-4.342	1.00	44.79	N
ATOM	2728	CA	TRP	A	176	38.693	-9.052	-3.078	1.00	42.74	C
ATOM	2730	CB	TRP	A	176	37.714	-8.389	-2.131	1.00	40.96	C
ATOM	2733	CG	TRP	A	176	37.119	-7.038	-2.642	1.00	40.42	C
ATOM	2734	CD1	TRP	A	176	35.982	-6.870	-3.326	1.00	39.92	C
ATOM	2736	NE1	TRP	A	176	35.755	-5.544	-3.560	1.00	41.12	N
ATOM	2738	CE2	TRP	A	176	36.782	-4.827	-3.009	1.00	41.59	C
ATOM	2739	CD2	TRP	A	176	37.639	-5.735	-2.393	1.00	38.66	C
ATOM	2740	CE3	TRP	A	176	38.790	-5.256	-1.764	1.00	39.18	C
ATOM	2742	CZ3	TRP	A	176	39.040	-3.931	-1.766	1.00	36.89	C
ATOM	2744	CH2	TRP	A	176	38.161	-3.054	-2.364	1.00	40.57	C
ATOM	2746	CZ2	TRP	A	176	37.023	-3.483	-3.010	1.00	40.72	C
ATOM	2748	C	TRP	A	176	39.264	-10.290	-2.369	1.00	43.56	C
ATOM	2749	O	TRP	A	176	39.952	-10.188	-1.370	1.00	42.95	O
ATOM	2750	N	GLY	A	177	38.981	-11.465	-2.907	1.00	45.37	N
ATOM	2752	CA	GLY	A	177	39.457	-12.658	-2.312	1.00	45.99	C
ATOM	2755	C	GLY	A	177	38.797	-13.810	-2.985	1.00	49.26	C
ATOM	2756	O	GLY	A	177	38.184	-13.706	-4.041	1.00	50.81	O
ATOM	2757	N	ALA	A	178	38.914	-14.939	-2.328	1.00	50.26	N
ATOM	2759	CA	ALA	A	178	38.527	-16.179	-2.908	1.00	53.28	C
ATOM	2761	CB	ALA	A	178	39.129	-17.222	-2.129	1.00	55.32	C
ATOM	2765	C	ALA	A	178	37.029	-16.275	-2.878	1.00	53.36	C
ATOM	2766	O	ALA	A	178	36.440	-15.593	-2.110	1.00	50.54	O
ATOM	2767	N	GLY	A	179	36.414	-17.067	-3.747	1.00	55.92	N
ATOM	2769	CA	GLY	A	179	34.974	-17.248	-3.736	1.00	57.34	C
ATOM	2772	C	GLY	A	179	34.100	-16.268	-4.495	1.00	56.65	C
ATOM	2773	O	GLY	A	179	34.480	-15.136	-4.759	1.00	53.03	O
ATOM	2774	N	GLU	A	180	32.925	-16.772	-4.873	1.00	59.51	N
ATOM	2776	CA	GLU	A	180	31.983	-16.075	-5.712	1.00	60.69	C
ATOM	2778	CB	GLU	A	180	30.822	-16.977	-6.100	1.00	64.23	C
ATOM	2781	CG	GLU	A	180	30.038	-16.423	-7.273	1.00	69.05	C
ATOM	2784	CD	GLU	A	180	28.984	-17.373	-7.882	1.00	79.34	C
ATOM	2785	OE1	GLU	A	180	27.807	-16.913	-7.924	1.00	83.24	O
ATOM	2786	OE2	GLU	A	180	29.287	-18.553	-8.346	1.00	85.62	O
ATOM	2787	C	GLU	A	180	31.425	-14.874	-4.965	1.00	58.20	C
ATOM	2788	O	GLU	A	180	31.056	-13.872	-5.585	1.00	55.67	O
ATOM	2789	N	GLU	A	181	31.338	-15.008	-3.639	1.00	57.72	N
ATOM	2791	CA	GLU	A	181	30.851	-13.919	-2.784	1.00	56.13	C
ATOM	2793	CB	GLU	A	181	30.543	-14.432	-1.393	1.00	56.53	C
ATOM	2796	CG	GLU	A	181	31.761	-14.311	-0.500	1.00	56.15	C
ATOM	2799	CD	GLU	A	181	31.764	-15.221	0.695	1.00	58.93	C
ATOM	2800	OE1	GLU	A	181	30.689	-15.799	0.952	1.00	63.12	O
ATOM	2801	OE2	GLU	A	181	32.849	-15.341	1.348	1.00	58.06	O
ATOM	2802	C	GLU	A	181	31.802	-12.698	-2.640	1.00	52.53	C
ATOM	2803	O	GLU	A	181	31.385	-11.655	-2.106	1.00	51.74	O
ATOM	2804	N	ASN	A	182	33.061	-12.845	-3.073	1.00	51.13	N
ATOM	2806	CA	ASN	A	182	34.102	-11.813	-2.936	1.00	47.84	C
ATOM	2808	CB	ASN	A	182	35.396	-12.431	-2.392	1.00	46.56	C
ATOM	2811	CG	ASN	A	182	35.351	-12.667	-0.891	1.00	46.60	C
ATOM	2812	OD1	ASN	A	182	34.761	-11.922	-0.093	1.00	45.34	O
ATOM	2813	ND2	ASN	A	182	36.004	-13.707	-0.499	1.00	47.84	N
ATOM	2816	C	ASN	A	182	34.383	-11.183	-4.272	1.00	47.77	C

ATOM	2817	O	ASN	A	182	35.383	-10.470	-4.441	1.00	45.91	O
ATOM	2818	N	CYS	A	183	33.503	-11.480	-5.236	1.00	50.13	N
ATOM	2820	CA	CYS	A	183	33.545	-10.849	-6.567	1.00	51.09	C
ATOM	2822	CB	CYS	A	183	32.578	-11.504	-7.579	1.00	53.48	C
ATOM	2825	SG	CYS	A	183	33.164	-13.146	-8.334	1.00	63.64	S
ATOM	2826	C	CYS	A	183	33.204	-9.376	-6.289	1.00	48.00	C
ATOM	2827	O	CYS	A	183	32.345	-9.091	-5.454	1.00	45.84	O
ATOM	2828	N	GLN	A	184	33.937	-8.507	-6.987	1.00	46.92	N
ATOM	2830	CA	GLN	A	184	33.621	-7.097	-7.082	1.00	47.29	C
ATOM	2832	CB	GLN	A	184	34.702	-6.286	-7.837	1.00	45.60	C
ATOM	2835	CG	GLN	A	184	34.313	-4.821	-8.086	1.00	46.53	C
ATOM	2838	CD	GLN	A	184	35.490	-3.732	-8.235	1.00	45.39	C
ATOM	2839	OE1	GLN	A	184	36.557	-3.993	-8.815	1.00	43.19	O
ATOM	2840	NE2	GLN	A	184	35.226	-2.509	-7.721	1.00	41.52	N
ATOM	2843	C	GLN	A	184	32.209	-6.922	-7.643	1.00	49.85	C
ATOM	2844	O	GLN	A	184	31.887	-7.418	-8.732	1.00	53.03	O
ATOM	2845	N	LYS	A	185	31.342	-6.271	-6.868	1.00	49.27	N
ATOM	2847	CA	LYS	A	185	30.086	-5.798	-7.441	1.00	51.63	C
ATOM	2849	CB	LYS	A	185	29.023	-5.620	-6.343	1.00	52.06	C
ATOM	2852	CG	LYS	A	185	28.517	-6.901	-5.629	1.00	53.93	C
ATOM	2855	CD	LYS	A	185	28.156	-6.583	-4.065	1.00	53.03	C
ATOM	2858	CE	LYS	A	185	28.695	-7.612	-3.059	1.00	49.07	C
ATOM	2861	NZ	LYS	A	185	27.572	-8.323	-2.540	1.00	54.03	N
ATOM	2865	C	LYS	A	185	30.318	-4.457	-8.218	1.00	50.18	C
ATOM	2866	O	LYS	A	185	30.983	-3.581	-7.726	1.00	49.13	O
ATOM	2867	N	LEU	A	186	29.780	-4.279	-9.412	1.00	52.33	N
ATOM	2869	CA	LEU	A	186	29.967	-3.001	-10.114	1.00	52.28	C
ATOM	2871	CB	LEU	A	186	30.613	-3.131	-11.493	1.00	53.18	C
ATOM	2874	CG	LEU	A	186	32.019	-3.758	-11.492	1.00	52.36	C
ATOM	2876	CD1	LEU	A	186	32.537	-4.107	-12.914	1.00	54.00	C
ATOM	2880	CD2	LEU	A	186	33.021	-2.930	-10.768	1.00	48.37	C
ATOM	2884	C	LEU	A	186	28.654	-2.280	-10.199	1.00	54.66	C
ATOM	2885	O	LEU	A	186	27.611	-2.903	-10.407	1.00	56.57	O
ATOM	2886	N	THR	A	187	28.725	-0.964	-9.972	1.00	54.57	N
ATOM	2888	CA	THR	A	187	27.587	-0.095	-10.035	1.00	57.60	C
ATOM	2890	CB	THR	A	187	27.054	0.099	-8.609	1.00	56.84	C
ATOM	2892	OG1	THR	A	187	28.131	0.506	-7.763	1.00	56.81	O
ATOM	2894	CG2	THR	A	187	26.549	-1.189	-7.960	1.00	55.84	C
ATOM	2898	C	THR	A	187	27.833	1.310	-10.662	1.00	59.12	C
ATOM	2899	O	THR	A	187	26.885	2.106	-10.684	1.00	60.17	O
ATOM	2900	N	LYS	A	188	29.051	1.629	-11.153	1.00	59.07	N
ATOM	2902	CA	LYS	A	188	29.350	2.969	-11.776	1.00	60.11	C
ATOM	2904	CB	LYS	A	188	30.430	3.762	-10.957	1.00	57.60	C
ATOM	2907	CG	LYS	A	188	30.704	5.336	-11.208	1.00	53.08	C
ATOM	2910	CD	LYS	A	188	31.704	6.033	-10.139	1.00	50.46	C
ATOM	2913	CE	LYS	A	188	32.508	7.420	-10.695	1.00	62.36	C
ATOM	2916	NZ	LYS	A	188	32.092	9.158	-10.925	1.00	56.57	N
ATOM	2920	C	LYS	A	188	29.771	2.735	-13.239	1.00	63.34	C
ATOM	2921	O	LYS	A	188	29.111	3.149	-14.157	1.00	66.50	O
ATOM	2922	N	ILE	A	189	30.843	1.998	-13.440	1.00	63.68	N
ATOM	2924	CA	ILE	A	189	31.424	1.690	-14.765	1.00	67.03	C
ATOM	2926	CB	ILE	A	189	32.738	0.990	-14.377	1.00	65.88	C
ATOM	2928	CG1	ILE	A	189	33.814	2.078	-14.376	1.00	68.15	C
ATOM	2931	CD1	ILE	A	189	34.948	1.628	-13.491	1.00	70.37	C
ATOM	2935	CG2	ILE	A	189	33.099	-0.237	-15.182	1.00	66.88	C
ATOM	2939	C	ILE	A	189	30.607	0.832	-15.788	1.00	70.02	C
ATOM	2940	O	ILE	A	189	30.992	0.629	-16.920	1.00	72.11	O
ATOM	2941	N	ILE	A	190	29.476	0.336	-15.338	1.00	70.44	N
ATOM	2943	CA	ILE	A	190	28.701	-0.687	-15.994	1.00	72.98	C
ATOM	2945	CB	ILE	A	190	28.515	-1.794	-14.937	1.00	70.63	C
ATOM	2947	CG1	ILE	A	190	29.637	-2.783	-15.140	1.00	71.22	C
ATOM	2950	CD1	ILE	A	190	29.307	-4.255	-14.645	1.00	76.22	C
ATOM	2954	CG2	ILE	A	190	27.125	-2.377	-14.917	1.00	71.99	C
ATOM	2958	C	ILE	A	190	27.366	-0.090	-16.413	1.00	76.24	C
ATOM	2959	O	ILE	A	190	26.564	-0.726	-17.119	1.00	79.79	O
ATOM	2960	N	CYS	A	191	27.136	1.143	-15.996	1.00	75.30	N
ATOM	2962	CA	CYS	A	191	25.844	1.785	-16.157	1.00	78.23	C
ATOM	2964	CB	CYS	A	191	25.752	2.923	-15.123	1.00	76.32	C

ATOM	2967	SG	CYS	A	191	26.102	2.238	-13.446	1.00	74.45	S
ATOM	2968	C	CYS	A	191	25.605	2.255	-17.601	1.00	81.91	C
ATOM	2969	O	CYS	A	191	26.543	2.581	-18.338	1.00	82.17	O
ATOM	2970	N	ALA	A	192	24.346	2.227	-18.012	1.00	84.89	N
ATOM	2972	CA	ALA	A	192	23.966	2.868	-19.251	1.00	89.58	C
ATOM	2974	CB	ALA	A	192	22.450	2.842	-19.400	1.00	93.30	C
ATOM	2978	C	ALA	A	192	24.506	4.339	-19.275	1.00	89.64	C
ATOM	2979	O	ALA	A	192	24.639	4.980	-18.201	1.00	85.53	O
ATOM	2980	N	GLN	A	193	24.836	4.846	-20.484	1.00	93.10	N
ATOM	2982	CA	GLN	A	193	25.353	6.215	-20.616	1.00	94.09	C
ATOM	2984	CB	GLN	A	193	25.538	6.634	-22.098	1.00	99.22	C
ATOM	2987	CG	GLN	A	193	26.163	8.062	-22.297	1.00	99.92	C
ATOM	2990	CD	GLN	A	193	25.933	8.638	-23.692	1.00	108.02	C
ATOM	2991	OE1	GLN	A	193	25.886	7.901	-24.675	1.00	115.13	O
ATOM	2992	NE2	GLN	A	193	25.800	9.955	-23.788	1.00	112.64	N
ATOM	2995	C	GLN	A	193	24.388	7.177	-19.901	1.00	94.51	C
ATOM	2996	O	GLN	A	193	24.827	8.100	-19.208	1.00	92.51	O
ATOM	2997	N	GLN	A	194	23.086	6.891	-20.050	1.00	97.35	N
ATOM	2999	CA	GLN	A	194	21.973	7.735	-19.591	1.00	99.21	C
ATOM	3001	CB	GLN	A	194	20.667	7.116	-20.142	1.00	103.46	C
ATOM	3008	C	GLN	A	194	21.839	8.015	-18.057	1.00	95.71	C
ATOM	3009	O	GLN	A	194	21.013	8.809	-17.645	1.00	97.16	O
ATOM	3010	N	CYS	A	195	22.633	7.364	-17.216	1.00	91.62	N
ATOM	3012	CA	CYS	A	195	22.490	7.526	-15.791	1.00	88.83	C
ATOM	3014	CB	CYS	A	195	22.917	6.292	-15.017	1.00	85.27	C
ATOM	3017	SG	CYS	A	195	21.902	4.815	-15.196	1.00	90.56	S
ATOM	3018	C	CYS	A	195	23.412	8.598	-15.346	1.00	86.94	C
ATOM	3019	O	CYS	A	195	24.607	8.599	-15.680	1.00	85.07	O
ATOM	3020	N	SER	A	196	22.858	9.456	-14.507	1.00	87.22	N
ATOM	3022	CA	SER	A	196	23.627	10.438	-13.814	1.00	85.77	C
ATOM	3024	CB	SER	A	196	22.648	11.354	-13.047	1.00	87.93	C
ATOM	3027	OG	SER	A	196	22.540	11.018	-11.651	1.00	86.76	O
ATOM	3029	C	SER	A	196	24.677	9.843	-12.839	1.00	81.16	C
ATOM	3030	O	SER	A	196	25.573	10.557	-12.395	1.00	81.13	O
ATOM	3031	N	GLY	A	197	24.538	8.580	-12.438	1.00	78.73	N
ATOM	3033	CA	GLY	A	197	25.334	8.000	-11.342	1.00	73.56	C
ATOM	3036	C	GLY	A	197	24.830	6.601	-11.007	1.00	72.09	C
ATOM	3037	O	GLY	A	197	23.864	6.111	-11.623	1.00	75.94	O
ATOM	3038	N	ARG	A	198	25.480	5.936	-10.068	1.00	67.34	N
ATOM	3040	CA	ARG	A	198	25.152	4.530	-9.712	1.00	65.41	C
ATOM	3042	CB	ARG	A	198	24.991	4.402	-8.192	1.00	63.68	C
ATOM	3045	CG	ARG	A	198	26.212	4.737	-7.348	1.00	57.45	C
ATOM	3048	CD	ARG	A	198	27.428	4.201	-7.931	1.00	54.35	C
ATOM	3051	NE	ARG	A	198	28.605	4.632	-7.227	1.00	49.75	N
ATOM	3053	CZ	ARG	A	198	29.670	3.892	-7.060	1.00	48.00	C
ATOM	3054	NH1	ARG	A	198	29.696	2.647	-7.498	1.00	51.64	N
ATOM	3057	NH2	ARG	A	198	30.717	4.384	-6.450	1.00	45.20	N
ATOM	3060	C	ARG	A	198	23.916	3.831	-10.309	1.00	67.96	C
ATOM	3061	O	ARG	A	198	22.865	4.429	-10.482	1.00	69.74	O
ATOM	3062	N	CYS	A	199	24.066	2.517	-10.533	1.00	68.17	N
ATOM	3064	CA	CYS	A	199	22.980	1.584	-11.035	1.00	70.76	C
ATOM	3066	CB	CYS	A	199	23.028	1.453	-12.552	1.00	73.17	C
ATOM	3069	SG	CYS	A	199	24.620	0.814	-13.123	1.00	70.86	S
ATOM	3070	C	CYS	A	199	23.083	0.184	-10.385	1.00	68.65	C
ATOM	3071	O	CYS	A	199	23.915	-0.044	-9.450	1.00	65.70	O
ATOM	3072	N	ARG	A	200	22.214	-0.730	-10.837	1.00	70.83	N
ATOM	3074	CA	ARG	A	200	22.179	-2.148	-10.359	1.00	69.39	C
ATOM	3076	CB	ARG	A	200	21.098	-2.232	-9.299	1.00	70.45	C
ATOM	3079	CG	ARG	A	200	19.798	-1.633	-9.740	1.00	73.74	C
ATOM	3082	CD	ARG	A	200	18.746	-1.838	-8.754	1.00	76.36	C
ATOM	3085	NE	ARG	A	200	17.429	-1.744	-9.348	1.00	82.84	N
ATOM	3087	CZ	ARG	A	200	16.411	-2.522	-9.015	1.00	86.81	C
ATOM	3088	NH1	ARG	A	200	16.540	-3.467	-8.083	1.00	85.55	N
ATOM	3091	NH2	ARG	A	200	15.245	-2.346	-9.616	1.00	92.94	N
ATOM	3094	C	ARG	A	200	21.932	-3.214	-11.467	1.00	71.45	C
ATOM	3095	O	ARG	A	200	21.777	-4.416	-11.236	1.00	71.97	O
ATOM	3096	N	GLY	A	201	21.869	-2.714	-12.673	1.00	73.31	N
ATOM	3098	CA	GLY	A	201	21.586	-3.476	-13.847	1.00	77.37	C

ATOM 3101	C	GLY A 201	22.227	-2.705	-14.954	1.00	78.01	C
ATOM 3102	O	GLY A 201	22.616	-1.565	-14.732	1.00	76.98	O
ATOM 3103	N	LYS A 202	22.386	-3.322	-16.117	1.00	80.54	N
ATOM 3105	CA	LYS A 202	23.135	-2.699	-17.185	1.00	81.72	C
ATOM 3107	CB	LYS A 202	23.959	-3.720	-18.012	1.00	81.81	C
ATOM 3114	C	LYS A 202	22.129	-1.884	-17.999	1.00	86.87	C
ATOM 3115	O	LYS A 202	22.526	-1.153	-18.906	1.00	88.82	O
ATOM 3116	N	SER A 203	20.842	-1.953	-17.613	1.00	89.89	N
ATOM 3118	CA	SER A 203	19.704	-1.280	-18.316	1.00	94.97	C
ATOM 3120	CB	SER A 203	18.414	-2.065	-18.031	1.00	98.06	C
ATOM 3123	OG	SER A 203	18.209	-2.178	-16.619	1.00	96.46	O
ATOM 3125	C	SER A 203	19.442	0.215	-17.938	1.00	94.60	C
ATOM 3126	O	SER A 203	19.990	0.716	-16.921	1.00	89.96	O
ATOM 3127	N	PRO A 204	18.628	0.908	-18.767	1.00	99.08	N
ATOM 3128	CA	PRO A 204	18.061	2.235	-18.420	1.00	99.90	C
ATOM 3130	CB	PRO A 204	17.375	2.695	-19.710	1.00	105.95	C
ATOM 3133	CG	PRO A 204	17.293	1.497	-20.624	1.00	108.00	C
ATOM 3136	CD	PRO A 204	18.277	0.493	-20.142	1.00	103.68	C
ATOM 3139	C	PRO A 204	17.048	2.246	-17.273	1.00	100.16	C
ATOM 3140	O	PRO A 204	17.060	3.133	-16.434	1.00	98.31	O
ATOM 3141	N	SER A 205	16.173	1.267	-17.206	1.00	102.97	N
ATOM 3143	CA	SER A 205	15.376	1.118	-15.992	1.00	103.18	C
ATOM 3145	CB	SER A 205	14.395	-0.004	-16.148	1.00	107.04	C
ATOM 3148	OG	SER A 205	15.123	-1.122	-16.565	1.00	106.57	O
ATOM 3150	C	SER A 205	16.237	0.823	-14.770	1.00	97.64	C
ATOM 3151	O	SER A 205	15.875	1.164	-13.651	1.00	97.84	O
ATOM 3152	N	ASP A 206	17.401	0.227	-14.948	1.00	94.14	N
ATOM 3154	CA	ASP A 206	18.244	-0.075	-13.781	1.00	88.73	C
ATOM 3156	CB	ASP A 206	19.266	-1.183	-14.155	1.00	86.17	C
ATOM 3162	C	ASP A 206	18.926	1.144	-13.099	1.00	84.68	C
ATOM 3163	O	ASP A 206	19.810	0.969	-12.300	1.00	80.94	O
ATOM 3164	N	CYS A 207	18.545	2.373	-13.378	1.00	86.84	N
ATOM 3166	CA	CYS A 207	19.279	3.512	-12.786	1.00	84.84	C
ATOM 3168	CB	CYS A 207	19.006	4.782	-13.567	1.00	88.15	C
ATOM 3171	SG	CYS A 207	19.830	4.949	-15.177	1.00	93.16	S
ATOM 3172	C	CYS A 207	18.945	3.809	-11.311	1.00	82.80	C
ATOM 3173	O	CYS A 207	17.821	3.524	-10.885	1.00	85.48	O
ATOM 3174	N	CYS A 208	19.915	4.385	-10.561	1.00	78.90	N
ATOM 3176	CA	CYS A 208	19.749	4.786	-9.117	1.00	76.99	C
ATOM 3178	CB	CYS A 208	20.959	4.473	-8.200	1.00	71.82	C
ATOM 3181	SG	CYS A 208	21.335	2.712	-7.852	1.00	71.46	S
ATOM 3182	C	CYS A 208	19.496	6.275	-9.006	1.00	77.75	C
ATOM 3183	O	CYS A 208	20.107	7.074	-9.710	1.00	76.69	O
ATOM 3184	N	HIS A 209	18.607	6.637	-8.092	1.00	79.28	N
ATOM 3186	CA	HIS A 209	18.280	8.040	-7.879	1.00	81.28	C
ATOM 3188	CB	HIS A 209	17.372	8.223	-6.680	1.00	82.57	C
ATOM 3191	CG	HIS A 209	16.907	9.628	-6.497	1.00	86.38	C
ATOM 3192	ND1	HIS A 209	15.853	10.170	-7.198	1.00	94.24	N
ATOM 3194	CE1	HIS A 209	15.655	11.421	-6.809	1.00	96.56	C
ATOM 3196	NE2	HIS A 209	16.568	11.718	-5.902	1.00	91.93	N
ATOM 3198	CD2	HIS A 209	17.357	10.610	-5.691	1.00	86.90	C
ATOM 3200	C	HIS A 209	19.551	8.845	-7.694	1.00	78.10	C
ATOM 3201	O	HIS A 209	20.510	8.343	-7.144	1.00	73.89	O
ATOM 3202	N	ASN A 210	19.543	10.089	-8.168	1.00	80.56	N
ATOM 3204	CA	ASN A 210	20.717	10.936	-8.164	1.00	78.95	C
ATOM 3206	CB	ASN A 210	20.251	12.335	-8.576	1.00	83.73	C
ATOM 3209	CG	ASN A 210	21.408	13.355	-8.850	1.00	85.95	C
ATOM 3210	OD1	ASN A 210	22.542	13.249	-8.323	1.00	81.95	O
ATOM 3211	ND2	ASN A 210	21.065	14.416	-9.643	1.00	92.19	N
ATOM 3214	C	ASN A 210	21.360	10.886	-6.758	1.00	75.18	C
ATOM 3215	O	ASN A 210	22.583	10.777	-6.639	1.00	72.10	O
ATOM 3216	N	GLN A 211	20.516	10.873	-5.716	1.00	75.07	N
ATOM 3218	CA	GLN A 211	20.930	10.869	-4.335	1.00	71.75	C
ATOM 3220	CB	GLN A 211	19.728	11.029	-3.403	1.00	73.99	C
ATOM 3223	CG	GLN A 211	18.918	12.325	-3.575	1.00	77.34	C
ATOM 3226	CD	GLN A 211	19.620	13.572	-3.094	1.00	73.73	C
ATOM 3227	OE1	GLN A 211	20.318	13.552	-2.113	1.00	70.44	O
ATOM 3228	NE2	GLN A 211	19.431	14.657	-3.802	1.00	77.44	N

ATOM 3231	C	GLN	A	211	21.690	9.671	-3.809	1.00	68.89	C
ATOM 3232	O	GLN	A	211	22.103	9.730	-2.654	1.00	68.37	O
ATOM 3233	N	CYS	A	212	21.895	8.585	-4.561	1.00	68.32	N
ATOM 3235	CA	CYS	A	212	22.445	7.341	-3.952	1.00	65.45	C
ATOM 3237	CB	CYS	A	212	21.877	6.071	-4.588	1.00	66.69	C
ATOM 3240	SG	CYS	A	212	20.095	5.933	-4.285	1.00	74.19	S
ATOM 3241	C	CYS	A	212	23.942	7.262	-3.984	1.00	61.86	C
ATOM 3242	O	CYS	A	212	24.613	7.907	-4.833	1.00	61.22	O
ATOM 3243	N	ALA	A	213	24.468	6.458	-3.056	1.00	59.19	N
ATOM 3245	CA	ALA	A	213	25.877	6.519	-2.765	1.00	56.34	C
ATOM 3247	CB	ALA	A	213	26.105	6.720	-1.392	1.00	55.01	C
ATOM 3251	C	ALA	A	213	26.611	5.295	-3.245	1.00	54.74	C
ATOM 3252	O	ALA	A	213	27.718	5.456	-3.821	1.00	54.91	O
ATOM 3253	N	ALA	A	214	26.052	4.111	-3.043	1.00	54.09	N
ATOM 3255	CA	ALA	A	214	26.786	2.893	-3.436	1.00	52.51	C
ATOM 3257	CB	ALA	A	214	26.982	2.055	-2.300	1.00	50.79	C
ATOM 3261	C	ALA	A	214	26.086	2.088	-4.486	1.00	55.33	C
ATOM 3262	O	ALA	A	214	26.726	1.278	-5.148	1.00	55.72	O
ATOM 3263	N	GLY	A	215	24.783	2.329	-4.653	1.00	58.27	N
ATOM 3265	CA	GLY	A	215	23.914	1.484	-5.445	1.00	60.72	C
ATOM 3268	C	GLY	A	215	22.512	1.447	-4.858	1.00	63.18	C
ATOM 3269	O	GLY	A	215	22.195	2.220	-3.951	1.00	62.63	O
ATOM 3270	N	CYS	A	216	21.657	0.574	-5.394	1.00	65.69	N
ATOM 3272	CA	CYS	A	216	20.258	0.586	-4.964	1.00	69.24	C
ATOM 3274	CB	CYS	A	216	19.535	1.716	-5.650	1.00	72.29	C
ATOM 3277	SG	CYS	A	216	19.657	1.623	-7.430	1.00	74.13	S
ATOM 3278	C	CYS	A	216	19.447	-0.665	-5.227	1.00	71.77	C
ATOM 3279	O	CYS	A	216	19.886	-1.583	-5.916	1.00	71.93	O
ATOM 3280	N	THR	A	217	18.233	-0.626	-4.696	1.00	73.98	N
ATOM 3282	CA	THR	A	217	17.304	-1.724	-4.665	1.00	76.58	C
ATOM 3284	CB	THR	A	217	16.933	-1.861	-3.231	1.00	76.60	C
ATOM 3286	OG1	THR	A	217	18.073	-2.376	-2.558	1.00	71.61	O
ATOM 3288	CG2	THR	A	217	15.797	-2.863	-2.987	1.00	81.96	C
ATOM 3292	C	THR	A	217	16.089	-1.360	-5.465	1.00	81.10	C
ATOM 3293	O	THR	A	217	15.039	-1.958	-5.310	1.00	84.07	O
ATOM 3294	N	GLY	A	218	16.232	-0.341	-6.305	1.00	81.30	N
ATOM 3296	CA	GLY	A	218	15.083	0.262	-6.937	1.00	86.06	C
ATOM 3299	C	GLY	A	218	15.298	1.697	-7.356	1.00	85.69	C
ATOM 3300	O	GLY	A	218	16.323	2.320	-7.062	1.00	81.26	O
ATOM 3301	N	PRO	A	219	14.270	2.229	-8.003	1.00	90.50	N
ATOM 3302	CA	PRO	A	219	14.353	3.496	-8.749	1.00	91.95	C
ATOM 3304	CB	PRO	A	219	12.956	3.600	-9.384	1.00	98.27	C
ATOM 3307	CG	PRO	A	219	12.042	2.762	-8.489	1.00	99.76	C
ATOM 3310	CD	PRO	A	219	12.909	1.656	-8.018	1.00	95.47	C
ATOM 3313	C	PRO	A	219	14.624	4.769	-7.946	1.00	90.33	C
ATOM 3314	O	PRO	A	219	15.405	5.591	-8.349	1.00	88.23	O
ATOM 3315	N	ARG	A	220	13.981	4.904	-6.810	1.00	91.91	N
ATOM 3317	CA	ARG	A	220	13.738	6.217	-6.233	1.00	93.99	C
ATOM 3319	CB	ARG	A	220	12.218	6.360	-5.904	1.00	100.22	C
ATOM 3322	CG	ARG	A	220	11.634	5.167	-5.100	1.00	102.19	C
ATOM 3325	CD	ARG	A	220	10.103	5.144	-4.836	1.00	109.43	C
ATOM 3328	NE	ARG	A	220	9.740	3.785	-4.386	1.00	111.00	N
ATOM 3330	CZ	ARG	A	220	8.505	3.358	-4.091	1.00	115.28	C
ATOM 3331	NH1	ARG	A	220	7.446	4.179	-4.177	1.00	118.66	N
ATOM 3334	NH2	ARG	A	220	8.347	2.087	-3.696	1.00	114.53	N
ATOM 3337	C	ARG	A	220	14.631	6.612	-5.014	1.00	89.71	C
ATOM 3338	O	ARG	A	220	15.450	5.829	-4.543	1.00	86.23	O
ATOM 3339	N	GLU	A	221	14.468	7.873	-4.587	1.00	90.79	N
ATOM 3341	CA	GLU	A	221	14.998	8.469	-3.350	1.00	88.14	C
ATOM 3343	CB	GLU	A	221	14.054	9.612	-2.885	1.00	92.21	C
ATOM 3346	CG	GLU	A	221	13.975	10.853	-3.765	1.00	95.00	C
ATOM 3349	CD	GLU	A	221	12.697	10.962	-4.627	1.00	103.69	C
ATOM 3350	OE1	GLU	A	221	12.320	9.931	-5.267	1.00	106.17	O
ATOM 3351	OE2	GLU	A	221	12.071	12.079	-4.702	1.00	106.53	O
ATOM 3352	C	GLU	A	221	15.116	7.478	-2.181	1.00	86.16	C
ATOM 3353	O	GLU	A	221	16.103	7.484	-1.457	1.00	82.16	O
ATOM 3354	N	SER	A	222	14.086	6.661	-1.965	1.00	89.43	N
ATOM 3356	CA	SER	A	222	14.027	5.806	-0.769	1.00	88.57	C

ATOM 3358	CB	SER	A	222	12.580	5.683	-0.281	1.00	93.94	C
ATOM 3361	OG	SER	A	222	11.809	4.919	-1.194	1.00	96.86	O
ATOM 3363	C	SER	A	222	14.640	4.395	-0.949	1.00	85.65	C
ATOM 3364	O	SER	A	222	14.676	3.619	0.016	1.00	85.41	O
ATOM 3365	N	ASP	A	223	15.135	4.061	-2.150	1.00	83.69	N
ATOM 3367	CA	ASP	A	223	15.657	2.711	-2.417	1.00	80.96	C
ATOM 3369	CB	ASP	A	223	15.185	2.195	-3.776	1.00	83.33	C
ATOM 3372	CG	ASP	A	223	13.703	2.299	-3.944	1.00	89.14	C
ATOM 3373	OD1	ASP	A	223	12.981	1.875	-3.024	1.00	91.08	O
ATOM 3374	OD2	ASP	A	223	13.165	2.800	-4.951	1.00	92.92	O
ATOM 3375	C	ASP	A	223	17.171	2.672	-2.346	1.00	75.27	C
ATOM 3376	O	ASP	A	223	17.825	1.737	-2.855	1.00	73.21	O
ATOM 3377	N	CYS	A	224	17.746	3.656	-1.683	1.00	72.71	N
ATOM 3379	CA	CYS	A	224	19.181	3.736	-1.655	1.00	67.99	C
ATOM 3381	CB	CYS	A	224	19.598	5.080	-1.135	1.00	67.67	C
ATOM 3384	SG	CYS	A	224	19.506	6.395	-2.344	1.00	70.46	S
ATOM 3385	C	CYS	A	224	19.754	2.694	-0.764	1.00	64.94	C
ATOM 3386	O	CYS	A	224	19.110	2.246	0.162	1.00	65.66	O
ATOM 3387	N	LEU	A	225	20.979	2.321	-1.078	1.00	61.70	N
ATOM 3389	CA	LEU	A	225	21.782	1.447	-0.245	1.00	59.61	C
ATOM 3391	CB	LEU	A	225	22.986	0.868	-1.023	1.00	56.35	C
ATOM 3394	CG	LEU	A	225	22.685	-0.402	-1.891	1.00	56.31	C
ATOM 3396	CD1	LEU	A	225	23.880	-0.866	-2.679	1.00	51.61	C
ATOM 3400	CD2	LEU	A	225	22.126	-1.570	-1.021	1.00	56.37	C
ATOM 3404	C	LEU	A	225	22.260	2.296	0.878	1.00	59.46	C
ATOM 3405	O	LEU	A	225	22.097	1.964	2.032	1.00	60.50	O
ATOM 3406	N	VAL	A	226	22.876	3.410	0.501	1.00	59.46	N
ATOM 3408	CA	VAL	A	226	23.450	4.366	1.417	1.00	58.35	C
ATOM 3410	CB	VAL	A	226	25.010	4.197	1.616	1.00	54.93	C
ATOM 3412	CG1	VAL	A	226	25.384	4.755	2.905	1.00	57.11	C
ATOM 3416	CG2	VAL	A	226	25.449	2.804	1.665	1.00	54.18	C
ATOM 3420	C	VAL	A	226	23.165	5.729	0.779	1.00	59.60	C
ATOM 3421	O	VAL	A	226	22.958	5.810	-0.407	1.00	60.42	O
ATOM 3422	N	CYS	A	227	23.138	6.793	1.574	1.00	60.27	N
ATOM 3424	CA	CYS	A	227	22.873	8.110	1.052	1.00	62.07	C
ATOM 3426	CB	CYS	A	227	22.091	8.926	2.031	1.00	64.54	C
ATOM 3429	SG	CYS	A	227	20.427	8.315	2.115	1.00	71.77	S
ATOM 3430	C	CYS	A	227	24.164	8.781	0.891	1.00	59.58	C
ATOM 3431	O	CYS	A	227	25.088	8.519	1.662	1.00	57.51	O
ATOM 3432	N	ARG	A	228	24.235	9.677	-0.087	1.00	60.72	N
ATOM 3434	CA	ARG	A	228	25.465	10.401	-0.289	1.00	58.88	C
ATOM 3436	CB	ARG	A	228	25.938	10.420	-1.728	1.00	58.79	C
ATOM 3439	CG	ARG	A	228	25.066	10.857	-2.770	1.00	60.60	C
ATOM 3442	CD	ARG	A	228	25.870	11.291	-4.034	1.00	60.85	C
ATOM 3445	NE	ARG	A	228	25.464	12.688	-4.273	1.00	66.58	N
ATOM 3447	CZ	ARG	A	228	25.007	13.147	-5.391	1.00	68.99	C
ATOM 3448	NH1	ARG	A	228	24.950	12.391	-6.479	1.00	73.85	N
ATOM 3451	NH2	ARG	A	228	24.612	14.369	-5.438	1.00	73.63	N
ATOM 3454	C	ARG	A	228	25.487	11.753	0.315	1.00	60.04	C
ATOM 3455	O	ARG	A	228	26.542	12.340	0.407	1.00	59.64	O
ATOM 3456	N	LYS	A	229	24.352	12.222	0.791	1.00	62.48	N
ATOM 3458	CA	LYS	A	229	24.353	13.442	1.549	1.00	63.66	C
ATOM 3460	CB	LYS	A	229	23.648	14.573	0.792	1.00	67.05	C
ATOM 3463	CG	LYS	A	229	24.518	15.066	-0.385	1.00	67.47	C
ATOM 3466	CD	LYS	A	229	23.831	16.061	-1.381	1.00	73.70	C
ATOM 3469	CE	LYS	A	229	24.848	16.474	-2.543	1.00	75.33	C
ATOM 3472	NZ	LYS	A	229	24.415	17.315	-3.811	1.00	79.07	N
ATOM 3476	C	LYS	A	229	23.794	13.092	2.898	1.00	63.63	C
ATOM 3477	O	LYS	A	229	24.536	12.696	3.782	1.00	61.98	O
ATOM 3478	N	PHE	A	230	22.501	13.163	3.054	1.00	66.52	N
ATOM 3480	CA	PHE	A	230	21.906	12.856	4.332	1.00	68.08	C
ATOM 3482	CB	PHE	A	230	21.322	14.129	4.906	1.00	71.57	C
ATOM 3485	CG	PHE	A	230	22.344	15.070	5.540	1.00	72.46	C
ATOM 3486	CD1	PHE	A	230	22.787	16.209	4.888	1.00	74.10	C
ATOM 3488	CE1	PHE	A	230	23.692	17.117	5.502	1.00	74.49	C
ATOM 3490	CZ	PHE	A	230	24.146	16.887	6.773	1.00	74.16	C
ATOM 3492	CE2	PHE	A	230	23.716	15.748	7.443	1.00	73.51	C
ATOM 3494	CD2	PHE	A	230	22.800	14.859	6.831	1.00	74.05	C

ATOM 3496	C	PHE	A	230	20.816	11.770	4.136	1.00	69.44	C
ATOM 3497	O	PHE	A	230	20.160	11.708	3.069	1.00	71.17	O
ATOM 3498	N	ARG	A	231	20.676	10.891	5.130	1.00	68.61	N
ATOM 3500	CA	ARG	A	231	19.584	9.915	5.195	1.00	70.29	C
ATOM 3502	CB	ARG	A	231	20.074	8.526	5.708	1.00	67.41	C
ATOM 3511	C	ARG	A	231	18.552	10.519	6.134	1.00	74.06	C
ATOM 3512	O	ARG	A	231	18.922	11.069	7.149	1.00	73.47	O
ATOM 3513	N	ASP	A	232	17.274	10.431	5.798	1.00	78.37	N
ATOM 3515	CA	ASP	A	232	16.234	10.971	6.662	1.00	84.33	C
ATOM 3517	CB	ASP	A	232	15.144	11.728	5.891	1.00	88.64	C
ATOM 3520	CG	ASP	A	232	14.232	12.510	6.806	1.00	92.77	C
ATOM 3521	OD1	ASP	A	232	14.285	12.270	8.018	1.00	92.46	O
ATOM 3522	OD2	ASP	A	232	13.441	13.392	6.417	1.00	96.60	O
ATOM 3523	C	ASP	A	232	15.612	9.869	7.492	1.00	87.11	C
ATOM 3524	O	ASP	A	232	15.962	9.695	8.668	1.00	88.04	O
ATOM 3525	N	GLU	A	233	14.665	9.150	6.910	1.00	89.56	N
ATOM 3527	CA	GLU	A	233	13.976	8.117	7.627	1.00	91.75	C
ATOM 3529	CB	GLU	A	233	12.599	8.613	8.111	1.00	97.99	C
ATOM 3532	CG	GLU	A	233	12.519	8.786	9.622	1.00	100.66	C
ATOM 3535	CD	GLU	A	233	11.380	9.704	10.061	1.00	109.45	C
ATOM 3536	OE1	GLU	A	233	10.502	9.995	9.208	1.00	113.90	O
ATOM 3537	OE2	GLU	A	233	11.348	10.144	11.258	1.00	112.63	O
ATOM 3538	C	GLU	A	233	13.901	7.127	6.539	1.00	90.22	C
ATOM 3539	O	GLU	A	233	12.882	6.953	5.916	1.00	94.09	O
ATOM 3540	N	ALA	A	234	15.026	6.560	6.197	1.00	85.19	N
ATOM 3542	CA	ALA	A	234	15.025	5.743	4.982	1.00	84.82	C
ATOM 3544	CB	ALA	A	234	13.817	4.741	5.027	1.00	88.93	C
ATOM 3548	C	ALA	A	234	15.060	6.514	3.595	1.00	84.64	C
ATOM 3549	O	ALA	A	234	15.340	5.900	2.543	1.00	83.37	O
ATOM 3550	N	THR	A	235	14.790	7.827	3.601	1.00	85.96	N
ATOM 3552	CA	THR	A	235	14.869	8.675	2.402	1.00	85.56	C
ATOM 3554	CB	THR	A	235	13.751	9.674	2.489	1.00	90.41	C
ATOM 3556	OG1	THR	A	235	12.551	8.977	2.820	1.00	94.00	O
ATOM 3558	CG2	THR	A	235	13.455	10.298	1.155	1.00	91.65	C
ATOM 3562	C	THR	A	235	16.208	9.413	2.264	1.00	81.37	C
ATOM 3563	O	THR	A	235	16.840	9.680	3.237	1.00	80.40	O
ATOM 3564	N	CYS	A	236	16.631	9.764	1.059	1.00	80.26	N
ATOM 3566	CA	CYS	A	236	17.911	10.456	0.845	1.00	76.60	C
ATOM 3568	CB	CYS	A	236	18.705	9.695	-0.191	1.00	73.69	C
ATOM 3571	SG	CYS	A	236	19.452	8.145	0.356	1.00	71.68	S
ATOM 3572	C	CYS	A	236	17.771	11.919	0.358	1.00	78.31	C
ATOM 3573	O	CYS	A	236	17.255	12.169	-0.717	1.00	80.49	O
ATOM 3574	N	LYS	A	237	18.295	12.873	1.114	1.00	77.15	N
ATOM 3576	CA	LYS	A	237	18.017	14.294	0.879	1.00	79.48	C
ATOM 3578	CB	LYS	A	237	17.178	14.842	2.038	1.00	82.43	C
ATOM 3581	CG	LYS	A	237	16.038	13.951	2.407	1.00	84.83	C
ATOM 3584	CD	LYS	A	237	15.070	14.580	3.357	1.00	90.16	C
ATOM 3587	CE	LYS	A	237	13.746	13.819	3.358	1.00	94.88	C
ATOM 3590	NZ	LYS	A	237	12.689	14.539	4.103	1.00	102.61	N
ATOM 3594	C	LYS	A	237	19.292	15.106	0.759	1.00	76.46	C
ATOM 3595	O	LYS	A	237	20.312	14.741	1.276	1.00	72.36	O
ATOM 3596	N	ASP	A	238	19.216	16.234	0.079	1.00	78.98	N
ATOM 3598	CA	ASP	A	238	20.321	17.193	0.047	1.00	77.64	C
ATOM 3600	CB	ASP	A	238	19.975	18.348	-0.895	1.00	81.85	C
ATOM 3603	CG	ASP	A	238	19.772	17.891	-2.338	1.00	82.50	C
ATOM 3604	OD1	ASP	A	238	20.406	16.888	-2.690	1.00	80.05	O
ATOM 3605	OD2	ASP	A	238	19.015	18.454	-3.170	1.00	84.38	O
ATOM 3606	C	ASP	A	238	20.641	17.763	1.424	1.00	76.62	C
ATOM 3607	O	ASP	A	238	21.770	18.114	1.707	1.00	73.74	O
ATOM 3608	N	THR	A	239	19.645	17.833	2.290	1.00	79.33	N
ATOM 3610	CA	THR	A	239	19.820	18.465	3.586	1.00	80.08	C
ATOM 3612	CB	THR	A	239	19.799	20.008	3.363	1.00	84.18	C
ATOM 3614	OG1	THR	A	239	20.373	20.685	4.484	1.00	83.41	O
ATOM 3616	CG2	THR	A	239	18.371	20.544	3.222	1.00	88.96	C
ATOM 3620	C	THR	A	239	18.769	18.064	4.591	1.00	82.04	C
ATOM 3621	O	THR	A	239	17.690	17.627	4.250	1.00	84.18	O
ATOM 3622	N	CYS	A	240	19.076	18.261	5.847	1.00	82.76	N
ATOM 3624	CA	CYS	A	240	18.073	18.046	6.850	1.00	87.41	C



ATOM 3626	CB	CYS	A	240	18.686	17.977	8.227	1.00	85.89	C
ATOM 3629	SG	CYS	A	240	19.820	16.589	8.264	1.00	84.87	S
ATOM 3630	C	CYS	A	240	17.039	19.132	6.784	1.00	93.59	C
ATOM 3631	O	CYS	A	240	17.356	20.313	6.683	1.00	95.73	O
ATOM 3632	N	PRO	A	241	15.780	18.740	6.812	1.00	55.04	N
ATOM 3633	CA	PRO	A	241	14.682	19.707	6.985	1.00	56.88	C
ATOM 3635	CB	PRO	A	241	13.431	18.836	7.235	1.00	58.19	C
ATOM 3638	CG	PRO	A	241	13.919	17.393	7.321	1.00	57.06	C
ATOM 3641	CD	PRO	A	241	15.281	17.357	6.687	1.00	54.91	C
ATOM 3644	C	PRO	A	241	14.936	20.540	8.198	1.00	57.83	C
ATOM 3645	O	PRO	A	241	15.201	20.028	9.281	1.00	57.58	O
ATOM 3646	N	PRO	A	242	14.852	21.827	8.038	1.00	58.40	N
ATOM 3647	CA	PRO	A	242	15.392	22.690	9.071	1.00	59.18	C
ATOM 3649	CB	PRO	A	242	15.812	23.929	8.325	1.00	59.59	C
ATOM 3652	CG	PRO	A	242	15.087	23.771	6.931	1.00	60.42	C
ATOM 3655	CD	PRO	A	242	14.198	22.555	6.961	1.00	58.64	C
ATOM 3658	C	PRO	A	242	14.349	22.986	10.097	1.00	60.49	C
ATOM 3659	O	PRO	A	242	13.169	22.609	9.956	1.00	58.83	O
ATOM 3660	N	LEU	A	243	14.859	23.681	11.113	1.00	61.42	N
ATOM 3662	CA	LEU	A	243	14.198	23.925	12.387	1.00	63.21	C
ATOM 3664	CB	LEU	A	243	15.253	24.301	13.402	1.00	63.51	C
ATOM 3667	CG	LEU	A	243	16.030	23.016	13.747	1.00	64.54	C
ATOM 3669	CD1	LEU	A	243	17.404	23.380	14.430	1.00	64.32	C
ATOM 3673	CD2	LEU	A	243	15.119	21.989	14.577	1.00	64.65	C
ATOM 3677	C	LEU	A	243	13.212	25.037	12.331	1.00	64.28	C
ATOM 3678	O	LEU	A	243	12.271	25.089	13.119	1.00	65.42	O
ATOM 3679	N	MET	A	244	13.425	25.919	11.372	1.00	63.70	N
ATOM 3681	CA	MET	A	244	12.606	27.066	11.251	1.00	65.18	C
ATOM 3683	CB	MET	A	244	13.312	28.151	11.980	1.00	65.81	C
ATOM 3686	CG	MET	A	244	13.551	27.784	13.412	1.00	66.25	C
ATOM 3689	SD	MET	A	244	13.078	29.142	14.347	1.00	72.32	S
ATOM 3690	CE	MET	A	244	11.731	28.403	15.295	1.00	73.17	C
ATOM 3694	C	MET	A	244	12.399	27.474	9.833	1.00	65.08	C
ATOM 3695	O	MET	A	244	13.312	27.447	9.054	1.00	63.58	O
ATOM 3696	N	LEU	A	245	11.177	27.876	9.529	1.00	67.08	N
ATOM 3698	CA	LEU	A	245	10.803	28.355	8.241	1.00	67.76	C
ATOM 3700	CB	LEU	A	245	9.739	27.435	7.703	1.00	68.55	C
ATOM 3703	CG	LEU	A	245	10.253	26.021	7.432	1.00	67.01	C
ATOM 3705	CD1	LEU	A	245	9.067	25.110	7.212	1.00	68.07	C
ATOM 3709	CD2	LEU	A	245	11.186	25.963	6.238	1.00	65.23	C
ATOM 3713	C	LEU	A	245	10.185	29.719	8.344	1.00	70.42	C
ATOM 3714	O	LEU	A	245	9.435	29.957	9.281	1.00	71.97	O
ATOM 3715	N	TYR	A	246	10.457	30.590	7.355	1.00	70.54	N
ATOM 3717	CA	TYR	A	246	9.619	31.746	7.100	1.00	72.93	C
ATOM 3719	CB	TYR	A	246	10.028	32.498	5.833	1.00	72.99	C
ATOM 3722	CG	TYR	A	246	9.424	33.903	5.785	1.00	76.04	C
ATOM 3723	CD1	TYR	A	246	10.123	34.980	6.284	1.00	76.12	C
ATOM 3725	CE1	TYR	A	246	9.595	36.220	6.294	1.00	78.89	C
ATOM 3727	CZ	TYR	A	246	8.358	36.417	5.810	1.00	80.72	C
ATOM 3728	OH	TYR	A	246	7.871	37.715	5.849	1.00	84.16	O
ATOM 3730	CE2	TYR	A	246	7.616	35.344	5.325	1.00	79.96	C
ATOM 3732	CD2	TYR	A	246	8.134	34.126	5.310	1.00	76.25	C
ATOM 3734	C	TYR	A	246	8.167	31.318	6.950	1.00	75.65	C
ATOM 3735	O	TYR	A	246	7.842	30.513	6.113	1.00	75.18	O
ATOM 3736	N	ASN	A	247	7.289	31.893	7.749	1.00	79.06	N
ATOM 3738	CA	ASN	A	247	5.865	31.606	7.710	1.00	81.97	C
ATOM 3740	CB	ASN	A	247	5.369	31.485	9.144	1.00	83.33	C
ATOM 3743	CG	ASN	A	247	4.117	30.711	9.248	1.00	86.35	C
ATOM 3744	OD1	ASN	A	247	3.048	31.184	8.805	1.00	90.91	O
ATOM 3745	ND2	ASN	A	247	4.212	29.494	9.824	1.00	83.97	N
ATOM 3748	C	ASN	A	247	5.152	32.746	7.008	1.00	84.93	C
ATOM 3749	O	ASN	A	247	5.206	33.878	7.458	1.00	85.90	O
ATOM 3750	N	PRO	A	248	4.500	32.451	5.903	1.00	86.39	N
ATOM 3751	CA	PRO	A	248	3.782	33.478	5.096	1.00	90.09	C
ATOM 3753	CB	PRO	A	248	3.144	32.675	3.968	1.00	90.03	C
ATOM 3756	CG	PRO	A	248	3.918	31.316	3.957	1.00	86.36	C
ATOM 3759	CD	PRO	A	248	4.423	31.092	5.346	1.00	84.43	C
ATOM 3762	C	PRO	A	248	2.673	34.251	5.837	1.00	94.90	C

ATOM 3763	O	PRO	A	248	2.511	35.494	5.688	1.00	96.88	O
ATOM 3764	N	THR	A	249	1.905	33.491	6.619	1.00	96.37	N
ATOM 3766	CA	THR	A	249	0.842	34.054	7.446	1.00	101.00	C
ATOM 3768	CB	THR	A	249	-0.184	32.930	7.919	1.00	102.23	C
ATOM 3770	OG1	THR	A	249	-1.321	32.895	7.044	1.00	104.68	O
ATOM 3772	CG2	THR	A	249	-0.848	33.250	9.282	1.00	105.46	C
ATOM 3776	C	THR	A	249	1.457	34.842	8.633	1.00	100.86	C
ATOM 3777	O	THR	A	249	1.021	35.972	8.921	1.00	104.58	O
ATOM 3778	N	THR	A	250	2.463	34.262	9.304	1.00	96.81	N
ATOM 3780	CA	THR	A	250	3.064	34.893	10.490	1.00	95.38	C
ATOM 3782	CB	THR	A	250	3.973	33.896	11.305	1.00	91.35	C
ATOM 3784	OG1	THR	A	250	3.395	32.584	11.401	1.00	90.19	O
ATOM 3786	CG2	THR	A	250	4.032	34.315	12.723	1.00	91.91	C
ATOM 3790	C	THR	A	250	3.893	36.124	10.108	1.00	94.90	C
ATOM 3791	O	THR	A	250	4.075	37.028	10.936	1.00	96.04	O
ATOM 3792	N	TYR	A	251	4.380	36.156	8.861	1.00	93.34	N
ATOM 3794	CA	TYR	A	251	5.414	37.103	8.412	1.00	92.01	C
ATOM 3796	CB	TYR	A	251	4.905	38.559	8.423	1.00	95.71	C
ATOM 3799	CG	TYR	A	251	3.736	38.867	7.485	1.00	100.54	C
ATOM 3800	CD1	TYR	A	251	2.415	38.810	7.927	1.00	103.41	C
ATOM 3802	CE1	TYR	A	251	1.387	39.090	7.079	1.00	106.88	C
ATOM 3804	CZ	TYR	A	251	1.655	39.462	5.781	1.00	106.57	C
ATOM 3805	OH	TYR	A	251	0.633	39.762	4.918	1.00	110.34	O
ATOM 3807	CE2	TYR	A	251	2.937	39.552	5.333	1.00	102.86	C
ATOM 3809	CD2	TYR	A	251	3.962	39.262	6.165	1.00	100.61	C
ATOM 3811	C	TYR	A	251	6.699	36.995	9.259	1.00	88.23	C
ATOM 3812	O	TYR	A	251	7.362	37.985	9.536	1.00	88.44	O
ATOM 3813	N	GLN	A	252	7.059	35.806	9.697	1.00	84.91	N
ATOM 3815	CA	GLN	A	252	8.325	35.701	10.397	1.00	81.92	C
ATOM 3817	CB	GLN	A	252	8.134	36.158	11.840	1.00	82.92	C
ATOM 3820	CG	GLN	A	252	7.289	35.204	12.679	1.00	84.45	C
ATOM 3823	CD	GLN	A	252	6.830	35.822	13.980	1.00	88.01	C
ATOM 3824	OE1	GLN	A	252	7.570	36.606	14.587	1.00	89.53	O
ATOM 3825	NE2	GLN	A	252	5.603	35.504	14.406	1.00	89.99	N
ATOM 3828	C	GLN	A	252	8.961	34.304	10.327	1.00	78.33	C
ATOM 3829	O	GLN	A	252	8.474	33.408	9.676	1.00	76.85	O
ATOM 3830	N	MET	A	253	10.095	34.153	10.987	1.00	76.53	N
ATOM 3832	CA	MET	A	253	10.666	32.843	11.258	1.00	74.03	C
ATOM 3834	CB	MET	A	253	12.137	32.999	11.601	1.00	71.87	C
ATOM 3837	CG	MET	A	253	12.931	33.489	10.435	1.00	71.14	C
ATOM 3840	SD	MET	A	253	12.878	32.239	9.059	1.00	75.45	S
ATOM 3841	CE	MET	A	253	12.407	33.204	7.938	1.00	75.10	C
ATOM 3845	C	MET	A	253	9.874	32.178	12.387	1.00	75.06	C
ATOM 3846	O	MET	A	253	9.697	32.729	13.464	1.00	76.02	O
ATOM 3847	N	ASP	A	254	9.369	30.994	12.098	1.00	75.32	N
ATOM 3849	CA	ASP	A	254	8.560	30.212	13.023	1.00	76.65	C
ATOM 3851	CB	ASP	A	254	7.086	30.304	12.587	1.00	79.52	C
ATOM 3854	CG	ASP	A	254	6.174	30.884	13.663	1.00	82.89	C
ATOM 3855	OD1	ASP	A	254	6.563	30.843	14.866	1.00	82.32	O
ATOM 3856	OD2	ASP	A	254	5.037	31.370	13.376	1.00	86.13	O
ATOM 3857	C	ASP	A	254	9.022	28.724	13.021	1.00	74.63	C
ATOM 3858	O	ASP	A	254	9.382	28.192	11.985	1.00	73.66	O
ATOM 3859	N	VAL	A	255	8.988	28.059	14.174	1.00	74.49	N
ATOM 3861	CA	VAL	A	255	9.301	26.612	14.277	1.00	72.81	C
ATOM 3863	CB	VAL	A	255	8.787	25.976	15.627	1.00	73.73	C
ATOM 3865	CG1	VAL	A	255	9.722	24.890	16.070	1.00	72.16	C
ATOM 3869	CG2	VAL	A	255	8.622	27.020	16.785	1.00	76.62	C
ATOM 3873	C	VAL	A	255	8.707	25.762	13.148	1.00	72.23	C
ATOM 3874	O	VAL	A	255	7.497	25.708	12.977	1.00	73.53	O
ATOM 3875	N	ASN	A	256	9.566	25.088	12.389	1.00	70.27	N
ATOM 3877	CA	ASN	A	256	9.101	24.122	11.380	1.00	70.31	C
ATOM 3879	CB	ASN	A	256	10.182	23.791	10.348	1.00	67.62	C
ATOM 3882	CG	ASN	A	256	9.858	22.537	9.502	1.00	65.90	C
ATOM 3883	OD1	ASN	A	256	8.855	21.859	9.709	1.00	65.23	O
ATOM 3884	ND2	ASN	A	256	10.740	22.225	8.558	1.00	63.09	N
ATOM 3887	C	ASN	A	256	8.719	22.844	12.077	1.00	71.03	C
ATOM 3888	O	ASN	A	256	9.570	22.241	12.710	1.00	68.99	O
ATOM 3889	N	PRO	A	257	7.457	22.424	11.954	1.00	74.05	N

ATOM 3890	CA	PRO	A	257	7.007	21.212	12.660	1.00	74.85	C
ATOM 3892	CB	PRO	A	257	5.467	21.181	12.420	1.00	77.52	C
ATOM 3895	CG	PRO	A	257	5.247	21.916	11.101	1.00	78.04	C
ATOM 3898	CD	PRO	A	257	6.380	23.014	11.114	1.00	76.18	C
ATOM 3901	C	PRO	A	257	7.711	19.971	12.080	1.00	72.67	C
ATOM 3902	O	PRO	A	257	8.226	19.202	12.894	1.00	73.12	O
ATOM 3903	N	GLU	A	258	7.762	19.793	10.752	1.00	71.09	N
ATOM 3905	CA	GLU	A	258	8.441	18.626	10.148	1.00	68.98	C
ATOM 3907	CB	GLU	A	258	8.100	18.532	8.631	1.00	68.15	C
ATOM 3914	C	GLU	A	258	9.997	18.534	10.399	1.00	66.74	C
ATOM 3915	O	GLU	A	258	10.638	17.563	9.979	1.00	65.05	O
ATOM 3916	N	GLY	A	259	10.584	19.518	11.105	1.00	66.61	N
ATOM 3918	CA	GLY	A	259	12.031	19.749	11.122	1.00	64.31	C
ATOM 3921	C	GLY	A	259	12.826	18.787	11.970	1.00	63.46	C
ATOM 3922	O	GLY	A	259	12.237	18.134	12.863	1.00	64.80	O
ATOM 3923	N	LYS	A	260	14.148	18.732	11.713	1.00	61.22	N
ATOM 3925	CA	LYS	A	260	15.061	17.684	12.239	1.00	59.87	C
ATOM 3927	CB	LYS	A	260	15.012	16.435	11.361	1.00	58.96	C
ATOM 3930	CG	LYS	A	260	13.635	15.850	11.292	1.00	61.80	C
ATOM 3933	CD	LYS	A	260	13.592	14.414	10.821	1.00	63.51	C
ATOM 3936	CE	LYS	A	260	12.464	14.188	9.801	1.00	64.20	C
ATOM 3939	NZ	LYS	A	260	11.982	12.820	9.961	1.00	68.50	N
ATOM 3943	C	LYS	A	260	16.528	18.103	12.418	1.00	57.61	C
ATOM 3944	O	LYS	A	260	17.017	18.961	11.792	1.00	57.42	O
ATOM 3945	N	TYR	A	261	17.211	17.436	13.305	1.00	56.94	N
ATOM 3947	CA	TYR	A	261	18.543	17.762	13.716	1.00	55.87	C
ATOM 3949	CB	TYR	A	261	18.663	17.429	15.213	1.00	56.86	C
ATOM 3952	CG	TYR	A	261	17.714	18.203	16.097	1.00	58.81	C
ATOM 3953	CD1	TYR	A	261	16.747	17.586	16.878	1.00	62.63	C
ATOM 3955	CE1	TYR	A	261	15.864	18.338	17.722	1.00	63.21	C
ATOM 3957	CZ	TYR	A	261	15.972	19.694	17.733	1.00	64.10	C
ATOM 3958	OH	TYR	A	261	15.188	20.526	18.498	1.00	67.69	O
ATOM 3960	CE2	TYR	A	261	16.924	20.311	16.958	1.00	64.45	C
ATOM 3962	CD2	TYR	A	261	17.785	19.570	16.154	1.00	61.93	C
ATOM 3964	C	TYR	A	261	19.496	16.898	12.904	1.00	54.12	C
ATOM 3965	O	TYR	A	261	19.153	15.858	12.422	1.00	53.80	O
ATOM 3966	N	SER	A	262	20.729	17.298	12.811	1.00	53.84	N
ATOM 3968	CA	SER	A	262	21.669	16.598	12.024	1.00	53.32	C
ATOM 3970	CB	SER	A	262	22.452	17.594	11.178	1.00	52.59	C
ATOM 3973	OG	SER	A	262	23.776	17.761	11.661	1.00	53.41	O
ATOM 3975	C	SER	A	262	22.566	15.727	12.939	1.00	54.56	C
ATOM 3976	O	SER	A	262	23.248	16.220	13.815	1.00	55.50	O
ATOM 3977	N	PHE	A	263	22.561	14.423	12.719	1.00	55.44	N
ATOM 3979	CA	PHE	A	263	23.483	13.544	13.407	1.00	58.17	C
ATOM 3981	CB	PHE	A	263	22.733	12.590	14.327	1.00	59.86	C
ATOM 3984	CG	PHE	A	263	23.613	11.673	15.142	1.00	61.87	C
ATOM 3985	CD1	PHE	A	263	24.705	12.159	15.826	1.00	62.54	C
ATOM 3987	CE1	PHE	A	263	25.441	11.352	16.570	1.00	64.60	C
ATOM 3989	CZ	PHE	A	263	25.119	10.015	16.657	1.00	67.48	C
ATOM 3991	CE2	PHE	A	263	24.039	9.515	16.003	1.00	65.99	C
ATOM 3993	CD2	PHE	A	263	23.287	10.334	15.264	1.00	63.61	C
ATOM 3995	C	PHE	A	263	24.214	12.764	12.367	1.00	58.42	C
ATOM 3996	O	PHE	A	263	23.644	11.903	11.736	1.00	57.38	O
ATOM 3997	N	GLY	A	264	25.513	13.051	12.319	1.00	60.11	N
ATOM 3999	CA	GLY	A	264	26.439	12.853	11.228	1.00	59.81	C
ATOM 4002	C	GLY	A	264	25.990	12.114	10.022	1.00	58.59	C
ATOM 4003	O	GLY	A	264	26.208	10.919	9.926	1.00	61.26	O
ATOM 4004	N	ALA	A	265	25.426	12.803	9.068	1.00	56.84	N
ATOM 4006	CA	ALA	A	265	24.939	12.139	7.818	1.00	55.65	C
ATOM 4008	CB	ALA	A	265	25.948	11.151	7.134	1.00	55.54	C
ATOM 4012	C	ALA	A	265	23.642	11.468	8.026	1.00	54.37	C
ATOM 4013	O	ALA	A	265	23.287	10.620	7.246	1.00	54.14	O
ATOM 4014	N	THR	A	266	22.924	11.936	9.029	1.00	54.84	N
ATOM 4016	CA	THR	A	266	21.622	11.451	9.350	1.00	54.78	C
ATOM 4018	CB	THR	A	266	21.814	10.371	10.300	1.00	56.35	C
ATOM 4020	OG1	THR	A	266	21.628	9.203	9.556	1.00	55.31	O
ATOM 4022	CG2	THR	A	266	20.782	10.293	11.424	1.00	58.51	C
ATOM 4026	C	THR	A	266	20.750	12.549	9.891	1.00	55.45	C

ATOM	4027	O	THR	A	266	21.247	13.566	10.359	1.00	55.61	O
ATOM	4028	N	CYS	A	267	19.445	12.342	9.755	1.00	55.64	N
ATOM	4030	CA	CYS	A	267	18.432	13.347	10.049	1.00	56.01	C
ATOM	4032	CB	CYS	A	267	17.598	13.692	8.831	1.00	54.41	C
ATOM	4035	SG	CYS	A	267	18.513	14.786	7.754	1.00	52.64	S
ATOM	4036	C	CYS	A	267	17.547	12.698	11.016	1.00	57.94	C
ATOM	4037	O	CYS	A	267	17.059	11.627	10.716	1.00	58.45	O
ATOM	4038	N	VAL	A	268	17.273	13.378	12.130	1.00	59.39	N
ATOM	4040	CA	VAL	A	268	16.860	12.719	13.344	1.00	61.02	C
ATOM	4042	CB	VAL	A	268	18.164	12.290	14.042	1.00	61.46	C
ATOM	4044	CG1	VAL	A	268	18.230	12.613	15.536	1.00	61.61	C
ATOM	4048	CG2	VAL	A	268	18.399	10.822	13.748	1.00	62.00	C
ATOM	4052	C	VAL	A	268	16.000	13.647	14.197	1.00	62.66	C
ATOM	4053	O	VAL	A	268	16.450	14.752	14.458	1.00	62.80	O
ATOM	4054	N	LYS	A	269	14.799	13.212	14.646	1.00	63.83	N
ATOM	4056	CA	LYS	A	269	13.909	14.122	15.410	1.00	65.02	C
ATOM	4058	CB	LYS	A	269	12.413	13.700	15.399	1.00	65.91	C
ATOM	4065	C	LYS	A	269	14.398	14.338	16.842	1.00	65.84	C
ATOM	4066	O	LYS	A	269	14.126	15.373	17.438	1.00	65.90	O
ATOM	4067	N	LYS	A	270	15.099	13.359	17.404	1.00	66.46	N
ATOM	4069	CA	LYS	A	270	15.659	13.544	18.749	1.00	67.95	C
ATOM	4071	CB	LYS	A	270	14.794	12.868	19.835	1.00	68.78	C
ATOM	4078	C	LYS	A	270	17.118	13.048	18.735	1.00	67.52	C
ATOM	4079	O	LYS	A	270	17.418	12.037	18.093	1.00	67.82	O
ATOM	4080	N	CYS	A	271	18.029	13.792	19.378	1.00	67.18	N
ATOM	4082	CA	CYS	A	271	19.404	13.329	19.533	1.00	67.14	C
ATOM	4084	CB	CYS	A	271	20.298	14.392	20.163	1.00	67.37	C
ATOM	4087	SG	CYS	A	271	20.613	15.867	19.148	1.00	64.80	S
ATOM	4088	C	CYS	A	271	19.474	12.059	20.385	1.00	69.08	C
ATOM	4089	O	CYS	A	271	18.591	11.760	21.157	1.00	69.41	O
ATOM	4090	N	PRO	A	272	20.500	11.265	20.163	1.00	70.38	N
ATOM	4091	CA	PRO	A	272	20.849	10.151	21.051	1.00	72.24	C
ATOM	4093	CB	PRO	A	272	22.117	9.577	20.427	1.00	72.83	C
ATOM	4096	CG	PRO	A	272	22.339	10.261	19.105	1.00	71.30	C
ATOM	4099	CD	PRO	A	272	21.334	11.334	18.950	1.00	69.52	C
ATOM	4102	C	PRO	A	272	21.148	10.500	22.518	1.00	74.35	C
ATOM	4103	O	PRO	A	272	21.335	11.680	22.899	1.00	72.50	O
ATOM	4104	N	ALA	A	273	21.207	9.460	23.360	1.00	76.92	N
ATOM	4106	CA	ALA	A	273	21.336	9.770	24.770	1.00	79.31	C
ATOM	4108	CB	ALA	A	273	21.267	8.471	25.704	1.00	81.70	C
ATOM	4112	C	ALA	A	273	22.660	10.549	24.920	1.00	80.08	C
ATOM	4113	O	ALA	A	273	23.657	10.214	24.269	1.00	81.25	O
ATOM	4114	N	ALA	A	274	22.643	11.606	25.731	1.00	80.37	N
ATOM	4116	CA	ALA	A	274	23.873	12.309	26.180	1.00	80.79	C
ATOM	4118	CB	ALA	A	274	24.953	11.284	26.709	1.00	82.92	C
ATOM	4122	C	ALA	A	274	24.467	13.290	25.124	1.00	79.12	C
ATOM	4123	O	ALA	A	274	25.525	13.931	25.359	1.00	80.24	O
ATOM	4124	N	TYR	A	275	23.770	13.426	23.984	1.00	76.37	N
ATOM	4126	CA	TYR	A	275	24.059	14.488	23.006	1.00	73.46	C
ATOM	4128	CB	TYR	A	275	23.851	13.945	21.589	1.00	72.66	C
ATOM	4131	CG	TYR	A	275	24.943	13.029	21.067	1.00	73.61	C
ATOM	4132	CD1	TYR	A	275	24.814	11.666	21.160	1.00	75.81	C
ATOM	4134	CE1	TYR	A	275	25.821	10.768	20.623	1.00	78.82	C
ATOM	4136	CZ	TYR	A	275	26.949	11.265	19.972	1.00	77.14	C
ATOM	4137	OH	TYR	A	275	27.922	10.378	19.496	1.00	74.15	O
ATOM	4139	CE2	TYR	A	275	27.068	12.649	19.842	1.00	76.49	C
ATOM	4141	CD2	TYR	A	275	26.066	13.529	20.396	1.00	74.32	C
ATOM	4143	C	TYR	A	275	23.253	15.819	23.224	1.00	70.60	C
ATOM	4144	O	TYR	A	275	22.179	15.869	23.817	1.00	69.08	O
ATOM	4145	N	VAL	A	276	23.819	16.887	22.710	1.00	68.49	N
ATOM	4147	CA	VAL	A	276	23.309	18.203	22.896	1.00	66.88	C
ATOM	4149	CB	VAL	A	276	24.361	19.009	23.644	1.00	67.40	C
ATOM	4151	CG1	VAL	A	276	24.077	20.468	23.538	1.00	66.99	C
ATOM	4155	CG2	VAL	A	276	24.424	18.581	25.105	1.00	69.12	C
ATOM	4159	C	VAL	A	276	23.119	18.799	21.516	1.00	65.33	C
ATOM	4160	O	VAL	A	276	23.945	18.554	20.648	1.00	64.97	O
ATOM	4161	N	VAL	A	277	22.077	19.608	21.316	1.00	64.18	N
ATOM	4163	CA	VAL	A	277	21.895	20.312	20.051	1.00	63.43	C

ATOM 4165	CB	VAL	A	277	20.423	20.537	19.793	1.00	63.64	C
ATOM 4167	CG1	VAL	A	277	20.178	21.579	18.660	1.00	63.81	C
ATOM 4171	CG2	VAL	A	277	19.719	19.232	19.503	1.00	63.12	C
ATOM 4175	C	VAL	A	277	22.591	21.672	20.042	1.00	63.46	C
ATOM 4176	O	VAL	A	277	22.630	22.344	20.998	1.00	64.27	O
ATOM 4177	N	THR	A	278	23.107	22.065	18.912	1.00	64.13	N
ATOM 4179	CA	THR	A	278	23.883	23.273	18.716	1.00	65.38	C
ATOM 4181	CB	THR	A	278	24.924	22.973	17.652	1.00	65.09	C
ATOM 4183	OG1	THR	A	278	25.926	22.130	18.219	1.00	66.18	O
ATOM 4185	CG2	THR	A	278	25.683	24.189	17.208	1.00	67.03	C
ATOM 4189	C	THR	A	278	22.963	24.272	18.124	1.00	66.33	C
ATOM 4190	O	THR	A	278	21.894	23.912	17.678	1.00	66.13	O
ATOM 4191	N	ASP	A	279	23.387	25.530	18.075	1.00	68.38	N
ATOM 4193	CA	ASP	A	279	22.622	26.565	17.371	1.00	69.35	C
ATOM 4195	CB	ASP	A	279	23.231	27.974	17.663	1.00	70.17	C
ATOM 4198	CG	ASP	A	279	22.622	28.619	18.927	1.00	74.12	C
ATOM 4199	OD1	ASP	A	279	21.509	28.147	19.255	1.00	80.61	O
ATOM 4200	OD2	ASP	A	279	23.129	29.541	19.668	1.00	75.22	O
ATOM 4201	C	ASP	A	279	22.387	26.333	15.837	1.00	68.57	C
ATOM 4202	O	ASP	A	279	21.493	26.966	15.271	1.00	69.77	O
ATOM 4203	N	HIS	A	280	23.158	25.484	15.155	1.00	67.36	N
ATOM 4205	CA	HIS	A	280	22.837	25.161	13.757	1.00	66.40	C
ATOM 4207	CB	HIS	A	280	24.111	24.930	12.934	1.00	67.43	C
ATOM 4210	CG	HIS	A	280	25.044	26.101	12.966	1.00	75.84	C
ATOM 4211	ND1	HIS	A	280	24.803	27.271	12.246	1.00	83.72	N
ATOM 4213	CE1	HIS	A	280	25.755	28.167	12.529	1.00	86.54	C
ATOM 4215	NE2	HIS	A	280	26.613	27.618	13.393	1.00	86.77	N
ATOM 4217	CD2	HIS	A	280	26.187	26.325	13.689	1.00	82.80	C
ATOM 4219	C	HIS	A	280	21.928	23.935	13.660	1.00	63.82	C
ATOM 4220	O	HIS	A	280	21.670	23.449	12.583	1.00	62.82	O
ATOM 4221	N	GLY	A	281	21.454	23.433	14.786	1.00	62.07	N
ATOM 4223	CA	GLY	A	281	20.711	22.192	14.803	1.00	60.37	C
ATOM 4226	C	GLY	A	281	21.450	20.874	14.599	1.00	58.17	C
ATOM 4227	O	GLY	A	281	20.872	19.957	14.053	1.00	54.70	O
ATOM 4228	N	SER	A	282	22.674	20.769	15.099	1.00	58.36	N
ATOM 4230	CA	SER	A	282	23.451	19.518	14.988	1.00	59.80	C
ATOM 4232	CB	SER	A	282	24.823	19.766	14.377	1.00	59.16	C
ATOM 4235	OG	SER	A	282	25.214	21.051	14.795	1.00	62.95	O
ATOM 4237	C	SER	A	282	23.673	18.870	16.322	1.00	60.81	C
ATOM 4238	O	SER	A	282	23.983	19.548	17.275	1.00	61.77	O
ATOM 4239	N	CYS	A	283	23.563	17.547	16.351	1.00	61.19	N
ATOM 4241	CA	CYS	A	283	23.886	16.751	17.517	1.00	62.86	C
ATOM 4243	CB	CYS	A	283	23.288	15.378	17.378	1.00	62.70	C
ATOM 4246	SG	CYS	A	283	21.524	15.593	17.275	1.00	63.42	S
ATOM 4247	C	CYS	A	283	25.378	16.643	17.738	1.00	64.27	C
ATOM 4248	O	CYS	A	283	26.086	15.979	17.042	1.00	64.51	O
ATOM 4249	N	VAL	A	284	25.827	17.322	18.756	1.00	65.87	N
ATOM 4251	CA	VAL	A	284	27.194	17.333	19.161	1.00	67.25	C
ATOM 4253	CB	VAL	A	284	27.645	18.783	19.075	1.00	66.98	C
ATOM 4255	CG1	VAL	A	284	28.287	19.308	20.427	1.00	69.20	C
ATOM 4259	CG2	VAL	A	284	28.515	18.989	17.847	1.00	65.40	C
ATOM 4263	C	VAL	A	284	27.288	16.742	20.591	1.00	69.52	C
ATOM 4264	O	VAL	A	284	26.303	16.509	21.280	1.00	68.60	O
ATOM 4265	N	ARG	A	285	28.494	16.492	21.043	1.00	72.61	N
ATOM 4267	CA	ARG	A	285	28.679	15.718	22.271	1.00	75.24	C
ATOM 4269	CB	ARG	A	285	30.043	15.046	22.222	1.00	77.38	C
ATOM 4272	CG	ARG	A	285	30.241	14.309	20.879	1.00	77.58	C
ATOM 4275	CD	ARG	A	285	31.506	13.520	20.741	1.00	79.64	C
ATOM 4278	NE	ARG	A	285	31.750	12.663	21.889	1.00	81.81	N
ATOM 4280	CZ	ARG	A	285	32.836	11.910	21.998	1.00	88.43	C
ATOM 4281	NH1	ARG	A	285	33.742	11.916	21.013	1.00	89.46	N
ATOM 4284	NH2	ARG	A	285	33.035	11.135	23.078	1.00	92.89	N
ATOM 4287	C	ARG	A	285	28.524	16.617	23.501	1.00	75.88	C
ATOM 4288	O	ARG	A	285	27.908	16.216	24.524	1.00	76.68	O
ATOM 4289	N	ALA	A	286	29.080	17.833	23.386	1.00	75.41	N
ATOM 4291	CA	ALA	A	286	29.095	18.805	24.477	1.00	74.95	C
ATOM 4293	CB	ALA	A	286	30.314	18.614	25.312	1.00	77.22	C
ATOM 4297	C	ALA	A	286	29.079	20.218	23.942	1.00	73.45	C

ATOM 4298	O	ALA	A	286	29.676	20.530	22.894	1.00	72.96	O
ATOM 4299	N	CYS	A	287	28.406	21.073	24.681	1.00	72.05	N
ATOM 4301	CA	CYS	A	287	28.399	22.468	24.351	1.00	71.75	C
ATOM 4303	CB	CYS	A	287	27.642	23.229	25.427	1.00	71.31	C
ATOM 4306	SG	CYS	A	287	25.875	22.940	25.188	1.00	73.43	S
ATOM 4307	C	CYS	A	287	29.768	23.066	24.284	1.00	72.75	C
ATOM 4308	O	CYS	A	287	30.617	22.701	25.063	1.00	73.85	O
ATOM 4309	N	GLY	A	288	29.938	24.051	23.398	1.00	72.69	N
ATOM 4311	CA	GLY	A	288	31.088	24.947	23.428	1.00	74.02	C
ATOM 4314	C	GLY	A	288	31.303	25.704	24.750	1.00	75.81	C
ATOM 4315	O	GLY	A	288	30.500	25.659	25.739	1.00	76.26	O
ATOM 4316	N	ALA	A	289	32.440	26.388	24.813	1.00	77.00	N
ATOM 4318	CA	ALA	A	289	32.570	27.523	25.728	1.00	76.07	C
ATOM 4320	CB	ALA	A	289	34.065	27.885	25.926	1.00	78.28	C
ATOM 4324	C	ALA	A	289	31.802	28.638	25.003	1.00	73.43	C
ATOM 4325	O	ALA	A	289	31.441	28.499	23.823	1.00	72.51	O
ATOM 4326	N	GLU	A	290	31.556	29.741	25.680	1.00	71.93	N
ATOM 4328	CA	GLU	A	290	30.674	30.784	25.138	1.00	69.93	C
ATOM 4330	CB	GLU	A	290	30.933	31.060	23.638	1.00	69.55	C
ATOM 4337	C	GLU	A	290	29.204	30.388	25.378	1.00	68.43	C
ATOM 4338	O	GLU	A	290	28.304	31.263	25.434	1.00	66.42	O
ATOM 4339	N	SER	A	291	28.965	29.076	25.564	1.00	68.05	N
ATOM 4341	CA	SER	A	291	27.586	28.561	25.670	1.00	66.93	C
ATOM 4343	CB	SER	A	291	27.133	27.982	24.310	1.00	66.63	C
ATOM 4346	OG	SER	A	291	27.904	26.832	23.974	1.00	70.01	O
ATOM 4348	C	SER	A	291	27.418	27.540	26.790	1.00	65.49	C
ATOM 4349	O	SER	A	291	28.386	27.171	27.433	1.00	65.82	O
ATOM 4350	N	TYR	A	292	26.187	27.099	27.003	1.00	63.29	N
ATOM 4352	CA	TYR	A	292	25.873	26.244	28.114	1.00	63.59	C
ATOM 4354	CB	TYR	A	292	25.605	27.105	29.361	1.00	63.27	C
ATOM 4357	CG	TYR	A	292	24.345	27.900	29.346	1.00	61.34	C
ATOM 4358	CD1	TYR	A	292	23.232	27.426	29.953	1.00	61.28	C
ATOM 4360	CE1	TYR	A	292	22.064	28.124	29.961	1.00	62.43	C
ATOM 4362	CZ	TYR	A	292	21.969	29.333	29.317	1.00	63.33	C
ATOM 4363	OH	TYR	A	292	20.753	30.010	29.369	1.00	61.75	O
ATOM 4365	CE2	TYR	A	292	23.089	29.833	28.659	1.00	61.75	C
ATOM 4367	CD2	TYR	A	292	24.269	29.109	28.695	1.00	61.15	C
ATOM 4369	C	TYR	A	292	24.680	25.364	27.824	1.00	63.55	C
ATOM 4370	O	TYR	A	292	23.902	25.665	26.944	1.00	61.46	O
ATOM 4371	N	GLU	A	293	24.514	24.283	28.594	1.00	65.22	N
ATOM 4373	CA	GLU	A	293	23.421	23.337	28.343	1.00	64.96	C
ATOM 4375	CB	GLU	A	293	23.822	21.946	28.802	1.00	66.42	C
ATOM 4378	CG	GLU	A	293	22.814	20.850	28.461	1.00	66.78	C
ATOM 4381	CD	GLU	A	293	23.357	19.453	28.686	1.00	68.32	C
ATOM 4382	OE1	GLU	A	293	24.573	19.284	28.917	1.00	66.66	O
ATOM 4383	OE2	GLU	A	293	22.541	18.514	28.585	1.00	72.49	O
ATOM 4384	C	GLU	A	293	22.180	23.740	29.062	1.00	64.18	C
ATOM 4385	O	GLU	A	293	22.258	24.258	30.131	1.00	64.53	O
ATOM 4386	N	MET	A	294	21.037	23.444	28.482	1.00	64.06	N
ATOM 4388	CA	MET	A	294	19.735	23.773	29.048	1.00	64.77	C
ATOM 4390	CB	MET	A	294	19.444	25.230	28.817	1.00	64.63	C
ATOM 4393	CG	MET	A	294	19.548	25.564	27.386	1.00	65.21	C
ATOM 4396	SD	MET	A	294	18.161	26.233	26.768	1.00	67.82	S
ATOM 4397	CE	MET	A	294	18.225	27.967	27.430	1.00	68.39	C
ATOM 4401	C	MET	A	294	18.693	22.959	28.335	1.00	65.12	C
ATOM 4402	O	MET	A	294	19.053	22.135	27.553	1.00	66.70	O
ATOM 4403	N	GLU	A	295	17.409	23.178	28.560	1.00	66.08	N
ATOM 4405	CA	GLU	A	295	16.403	22.270	28.025	1.00	66.85	C
ATOM 4407	CB	GLU	A	295	16.105	21.144	29.030	1.00	68.03	C
ATOM 4410	CG	GLU	A	295	15.320	19.987	28.420	1.00	70.00	C
ATOM 4413	CD	GLU	A	295	15.183	18.715	29.276	1.00	72.37	C
ATOM 4414	OE1	GLU	A	295	15.186	18.767	30.490	1.00	69.76	O
ATOM 4415	OE2	GLU	A	295	15.049	17.605	28.700	1.00	77.58	O
ATOM 4416	C	GLU	A	295	15.120	22.957	27.586	1.00	67.10	C
ATOM 4417	O	GLU	A	295	14.683	23.903	28.155	1.00	66.08	O
ATOM 4418	N	GLU	A	296	14.521	22.402	26.557	1.00	68.39	N
ATOM 4420	CA	GLU	A	296	13.398	22.997	25.876	1.00	69.98	C
ATOM 4422	CB	GLU	A	296	13.906	24.045	24.880	1.00	69.31	C

ATOM	4425	CG	GLU	A	296	12.939	25.175	24.543	1.00	71.32	C
ATOM	4428	CD	GLU	A	296	13.505	26.317	23.613	1.00	72.51	C
ATOM	4429	OE1	GLU	A	296	14.592	26.270	22.931	1.00	67.50	O
ATOM	4430	OE2	GLU	A	296	12.790	27.333	23.556	1.00	76.03	O
ATOM	4431	C	GLU	A	296	12.649	21.830	25.194	1.00	71.02	C
ATOM	4432	O	GLU	A	296	13.163	21.119	24.332	1.00	69.99	O
ATOM	4433	N	ASP	A	297	11.435	21.621	25.654	1.00	72.87	N
ATOM	4435	CA	ASP	A	297	10.564	20.526	25.225	1.00	74.19	C
ATOM	4437	CB	ASP	A	297	9.775	20.856	23.925	1.00	74.54	C
ATOM	4440	CG	ASP	A	297	8.253	20.479	24.078	1.00	78.91	C
ATOM	4441	OD1	ASP	A	297	7.709	19.556	23.383	1.00	80.68	O
ATOM	4442	OD2	ASP	A	297	7.528	21.033	24.964	1.00	83.36	O
ATOM	4443	C	ASP	A	297	11.184	19.131	25.212	1.00	73.07	C
ATOM	4444	O	ASP	A	297	10.949	18.325	24.330	1.00	72.94	O
ATOM	4445	N	GLY	A	298	11.922	18.833	26.251	1.00	72.78	N
ATOM	4447	CA	GLY	A	298	12.585	17.537	26.330	1.00	72.97	C
ATOM	4450	C	GLY	A	298	13.754	17.408	25.377	1.00	71.57	C
ATOM	4451	O	GLY	A	298	14.020	16.324	24.868	1.00	72.37	O
ATOM	4452	N	VAL	A	299	14.432	18.524	25.111	1.00	70.39	N
ATOM	4454	CA	VAL	A	299	15.601	18.557	24.223	1.00	68.75	C
ATOM	4456	CB	VAL	A	299	15.264	19.209	22.862	1.00	68.23	C
ATOM	4458	CG1	VAL	A	299	16.357	18.967	21.894	1.00	67.60	C
ATOM	4462	CG2	VAL	A	299	13.917	18.716	22.298	1.00	68.94	C
ATOM	4466	C	VAL	A	299	16.718	19.382	24.871	1.00	67.74	C
ATOM	4467	O	VAL	A	299	16.573	20.574	25.068	1.00	66.87	O
ATOM	4468	N	ARG	A	300	17.821	18.729	25.220	1.00	67.57	N
ATOM	4470	CA	ARG	A	300	19.013	19.425	25.667	1.00	66.47	C
ATOM	4472	CB	ARG	A	300	19.957	18.390	26.324	1.00	67.22	C
ATOM	4481	C	ARG	A	300	19.626	20.231	24.437	1.00	64.86	C
ATOM	4482	O	ARG	A	300	19.911	19.629	23.366	1.00	63.66	O
ATOM	4483	N	LYS	A	301	19.757	21.576	24.594	1.00	63.56	N
ATOM	4485	CA	LYS	A	301	20.400	22.506	23.623	1.00	62.09	C
ATOM	4487	CB	LYS	A	301	19.365	23.446	23.014	1.00	61.81	C
ATOM	4490	CG	LYS	A	301	18.004	22.874	22.945	1.00	62.27	C
ATOM	4493	CD	LYS	A	301	17.127	23.599	21.987	1.00	62.22	C
ATOM	4496	CE	LYS	A	301	15.767	22.883	21.889	1.00	64.18	C
ATOM	4499	NZ	LYS	A	301	14.711	23.900	21.583	1.00	68.36	N
ATOM	4503	C	LYS	A	301	21.474	23.415	24.208	1.00	61.40	C
ATOM	4504	O	LYS	A	301	21.486	23.655	25.364	1.00	61.73	O
ATOM	4505	N	CYS	A	302	22.354	23.943	23.380	1.00	60.84	N
ATOM	4507	CA	CYS	A	302	23.324	24.956	23.768	1.00	61.35	C
ATOM	4509	CB	CYS	A	302	24.550	24.881	22.905	1.00	60.99	C
ATOM	4512	SG	CYS	A	302	25.368	23.314	23.146	1.00	67.99	S
ATOM	4513	C	CYS	A	302	22.794	26.275	23.482	1.00	60.63	C
ATOM	4514	O	CYS	A	302	22.523	26.536	22.363	1.00	62.04	O
ATOM	4515	N	ALA	A	303	22.657	27.119	24.472	1.00	60.94	N
ATOM	4517	CA	ALA	A	303	22.390	28.522	24.292	1.00	60.90	C
ATOM	4519	CB	ALA	A	303	21.236	28.950	25.251	1.00	60.91	C
ATOM	4523	C	ALA	A	303	23.723	29.290	24.565	1.00	61.01	C
ATOM	4524	O	ALA	A	303	24.608	28.755	25.162	1.00	61.07	O
ATOM	4525	N	LYS	A	304	23.867	30.532	24.114	1.00	61.74	N
ATOM	4527	CA	LYS	A	304	25.101	31.306	24.314	1.00	62.76	C
ATOM	4529	CB	LYS	A	304	25.383	32.328	23.177	1.00	62.14	C
ATOM	4536	C	LYS	A	304	24.981	32.007	25.672	1.00	63.58	C
ATOM	4537	O	LYS	A	304	23.927	32.573	26.016	1.00	62.97	O
ATOM	4538	N	CYS	A	305	26.067	31.947	26.441	1.00	64.37	N
ATOM	4540	CA	CYS	A	305	26.054	32.434	27.809	1.00	64.66	C
ATOM	4542	CB	CYS	A	305	27.392	32.217	28.470	1.00	65.21	C
ATOM	4545	SG	CYS	A	305	27.739	30.498	28.766	1.00	63.94	S
ATOM	4546	C	CYS	A	305	25.781	33.878	27.864	1.00	64.83	C
ATOM	4547	O	CYS	A	305	26.343	34.630	27.095	1.00	64.68	O
ATOM	4548	N	GLU	A	306	24.936	34.253	28.814	1.00	66.05	N
ATOM	4550	CA	GLU	A	306	24.524	35.644	29.001	1.00	66.80	C
ATOM	4552	CB	GLU	A	306	23.563	35.751	30.202	1.00	66.67	C
ATOM	4559	C	GLU	A	306	25.812	36.489	29.193	1.00	67.43	C
ATOM	4560	O	GLU	A	306	26.353	37.052	28.177	1.00	68.24	O
ATOM	4561	N	GLY	A	307	26.321	36.534	30.441	1.00	65.77	N
ATOM	4563	CA	GLY	A	307	27.647	37.068	30.683	1.00	65.67	C

ATOM 4566	C	GLY A 307	28.789	36.058	30.514	1.00	65.77	C
ATOM 4567	O	GLY A 307	28.749	35.218	29.655	1.00	66.29	O
ATOM 4568	N	PRO A 308	29.826	36.129	31.345	1.00	65.73	N
ATOM 4569	CA	PRO A 308	30.736	34.998	31.452	1.00	65.66	C
ATOM 4571	CB	PRO A 308	31.671	35.399	32.609	1.00	66.34	C
ATOM 4574	CG	PRO A 308	31.364	36.818	32.999	1.00	65.33	C
ATOM 4577	CD	PRO A 308	30.197	37.256	32.246	1.00	65.52	C
ATOM 4580	C	PRO A 308	29.978	33.708	31.807	1.00	64.49	C
ATOM 4581	O	PRO A 308	29.013	33.700	32.535	1.00	63.44	O
ATOM 4582	N	CYS A 309	30.438	32.594	31.299	1.00	64.85	N
ATOM 4584	CA	CYS A 309	29.805	31.354	31.627	1.00	64.54	C
ATOM 4586	CB	CYS A 309	30.386	30.212	30.830	1.00	65.21	C
ATOM 4589	SG	CYS A 309	29.788	30.212	29.155	1.00	66.57	S
ATOM 4590	C	CYS A 309	29.997	31.025	33.032	1.00	64.83	C
ATOM 4591	O	CYS A 309	30.976	31.344	33.634	1.00	65.61	O
ATOM 4592	N	ARG A 310	29.058	30.285	33.547	1.00	60.31	N
ATOM 4594	CA	ARG A 310	29.113	29.882	34.923	1.00	57.41	C
ATOM 4596	CB	ARG A 310	27.799	29.192	35.275	1.00	58.70	C
ATOM 4599	CG	ARG A 310	27.864	28.223	36.449	1.00	59.00	C
ATOM 4602	CD	ARG A 310	26.495	27.931	37.089	1.00	61.96	C
ATOM 4605	NE	ARG A 310	26.526	28.291	38.498	1.00	59.13	N
ATOM 4607	CZ	ARG A 310	26.658	27.437	39.485	1.00	58.19	C
ATOM 4608	NH1	ARG A 310	26.733	26.108	39.288	1.00	62.56	N
ATOM 4611	NH2	ARG A 310	26.687	27.939	40.688	1.00	54.22	N
ATOM 4614	C	ARG A 310	30.266	28.956	35.092	1.00	56.38	C
ATOM 4615	O	ARG A 310	30.384	27.970	34.367	1.00	60.06	O
ATOM 4616	N	LYS A 311	31.077	29.253	36.067	1.00	52.95	N
ATOM 4618	CA	LYS A 311	32.237	28.466	36.405	1.00	53.16	C
ATOM 4620	CB	LYS A 311	33.489	29.100	35.809	1.00	53.22	C
ATOM 4623	CG	LYS A 311	34.691	28.185	35.636	1.00	54.72	C
ATOM 4626	CD	LYS A 311	35.994	28.877	36.020	1.00	54.84	C
ATOM 4629	CE	LYS A 311	37.190	28.137	35.562	1.00	55.94	C
ATOM 4632	NZ	LYS A 311	37.492	28.559	34.153	1.00	61.52	N
ATOM 4636	C	LYS A 311	32.370	28.399	37.919	1.00	51.04	C
ATOM 4637	O	LYS A 311	32.461	29.412	38.626	1.00	48.96	O
ATOM 4638	N	VAL A 312	32.389	27.190	38.441	1.00	52.10	N
ATOM 4640	CA	VAL A 312	32.387	27.022	39.879	1.00	49.43	C
ATOM 4642	CB	VAL A 312	31.419	25.856	40.214	1.00	51.43	C
ATOM 4644	CG1	VAL A 312	31.644	25.299	41.629	1.00	51.31	C
ATOM 4648	CG2	VAL A 312	29.941	26.303	40.019	1.00	51.87	C
ATOM 4652	C	VAL A 312	33.810	26.792	40.321	1.00	47.46	C
ATOM 4653	O	VAL A 312	34.534	26.134	39.633	1.00	48.81	O
ATOM 4654	N	CYS A 313	34.224	27.342	41.452	1.00	45.64	N
ATOM 4656	CA	CYS A 313	35.603	27.139	41.985	1.00	46.21	C
ATOM 4658	CB	CYS A 313	36.533	28.305	41.639	1.00	45.10	C
ATOM 4661	SG	CYS A 313	36.511	28.703	39.843	1.00	55.46	S
ATOM 4662	C	CYS A 313	35.674	26.972	43.482	1.00	44.15	C
ATOM 4663	O	CYS A 313	35.043	27.684	44.222	1.00	44.97	O
ATOM 4664	N	ASN A 314	36.502	26.078	43.951	1.00	44.46	N
ATOM 4666	CA	ASN A 314	36.817	25.995	45.346	1.00	42.36	C
ATOM 4668	CB	ASN A 314	37.915	24.968	45.553	1.00	43.90	C
ATOM 4671	CG	ASN A 314	37.515	23.563	45.052	1.00	46.81	C
ATOM 4672	OD1	ASN A 314	36.465	23.016	45.453	1.00	50.58	O
ATOM 4673	ND2	ASN A 314	38.309	23.026	44.099	1.00	49.45	N
ATOM 4676	C	ASN A 314	37.278	27.306	45.972	1.00	40.41	C
ATOM 4677	O	ASN A 314	37.974	28.140	45.385	1.00	40.47	O
ATOM 4678	N	GLY A 315	36.860	27.494	47.209	1.00	39.42	N
ATOM 4680	CA	GLY A 315	37.329	28.597	47.998	1.00	36.84	C
ATOM 4683	C	GLY A 315	38.633	28.342	48.697	1.00	36.39	C
ATOM 4684	O	GLY A 315	39.321	27.340	48.580	1.00	36.34	O
ATOM 4685	N	ILE A 316	38.975	29.319	49.483	1.00	35.62	N
ATOM 4687	CA	ILE A 316	40.197	29.200	50.208	1.00	36.69	C
ATOM 4689	CB	ILE A 316	40.615	30.542	50.613	1.00	34.84	C
ATOM 4691	CG1	ILE A 316	41.327	31.048	49.383	1.00	37.92	C
ATOM 4694	CD1	ILE A 316	41.400	32.434	49.319	1.00	40.69	C
ATOM 4698	CG2	ILE A 316	41.647	30.485	51.734	1.00	34.92	C
ATOM 4702	C	ILE A 316	40.093	28.246	51.344	1.00	37.13	C
ATOM 4703	O	ILE A 316	39.246	28.398	52.197	1.00	36.17	O



ATOM	4704	N	GLY	A	317	40.969	27.271	51.351	1.00	38.50	N
ATOM	4706	CA	GLY	A	317	40.937	26.289	52.410	1.00	40.78	C
ATOM	4709	C	GLY	A	317	40.864	24.924	51.786	1.00	43.80	C
ATOM	4710	O	GLY	A	317	41.628	23.995	52.149	1.00	46.54	O
ATOM	4711	N	ILE	A	318	40.026	24.860	50.760	1.00	43.85	N
ATOM	4713	CA	ILE	A	318	39.762	23.645	49.983	1.00	46.17	C
ATOM	4715	CB	ILE	A	318	38.287	23.658	49.611	1.00	45.60	C
ATOM	4717	CG1	ILE	A	318	37.441	23.639	50.888	1.00	43.98	C
ATOM	4720	CD1	ILE	A	318	36.125	24.137	50.662	1.00	43.89	C
ATOM	4724	CG2	ILE	A	318	38.020	22.487	48.661	1.00	47.89	C
ATOM	4728	C	ILE	A	318	40.520	23.509	48.639	1.00	47.63	C
ATOM	4729	O	ILE	A	318	40.833	24.543	48.012	1.00	46.75	O
ATOM	4730	N	GLY	A	319	40.735	22.254	48.176	1.00	49.13	N
ATOM	4732	CA	GLY	A	319	41.097	21.976	46.806	1.00	49.93	C
ATOM	4735	C	GLY	A	319	42.480	22.498	46.473	1.00	50.82	C
ATOM	4736	O	GLY	A	319	43.460	22.255	47.179	1.00	50.60	O
ATOM	4737	N	GLU	A	320	42.574	23.195	45.349	1.00	51.94	N
ATOM	4739	CA	GLU	A	320	43.811	23.859	44.916	1.00	52.89	C
ATOM	4741	CB	GLU	A	320	43.504	24.771	43.735	1.00	53.88	C
ATOM	4744	CG	GLU	A	320	42.802	24.123	42.555	1.00	59.54	C
ATOM	4747	CD	GLU	A	320	41.252	24.262	42.562	1.00	63.07	C
ATOM	4748	OE1	GLU	A	320	40.603	24.715	43.485	1.00	57.30	O
ATOM	4749	OE2	GLU	A	320	40.630	23.836	41.573	1.00	75.97	O
ATOM	4750	C	GLU	A	320	44.342	24.781	46.010	1.00	50.87	C
ATOM	4751	O	GLU	A	320	45.521	25.097	46.022	1.00	52.50	O
ATOM	4752	N	TYR	A	321	43.445	25.243	46.893	1.00	47.74	N
ATOM	4754	CA	TYR	A	321	43.796	25.996	48.048	1.00	45.39	C
ATOM	4756	CB	TYR	A	321	42.903	27.163	48.113	1.00	43.88	C
ATOM	4759	CG	TYR	A	321	42.549	27.735	46.790	1.00	47.78	C
ATOM	4760	CD1	TYR	A	321	41.299	27.545	46.250	1.00	51.91	C
ATOM	4762	CE1	TYR	A	321	40.963	28.042	45.044	1.00	54.97	C
ATOM	4764	CZ	TYR	A	321	41.861	28.800	44.366	1.00	58.00	C
ATOM	4765	OH	TYR	A	321	41.452	29.315	43.136	1.00	61.65	O
ATOM	4767	CE2	TYR	A	321	43.129	29.019	44.881	1.00	55.75	C
ATOM	4769	CD2	TYR	A	321	43.461	28.453	46.077	1.00	54.38	C
ATOM	4771	C	TYR	A	321	43.715	25.308	49.398	1.00	45.37	C
ATOM	4772	O	TYR	A	321	43.438	25.950	50.371	1.00	42.50	O
ATOM	4773	N	LYS	A	322	44.043	24.018	49.489	1.00	49.57	N
ATOM	4775	CA	LYS	A	322	44.267	23.354	50.814	1.00	50.70	C
ATOM	4777	CB	LYS	A	322	44.619	21.795	50.737	1.00	52.77	C
ATOM	4784	C	LYS	A	322	45.384	24.199	51.513	1.00	49.99	C
ATOM	4785	O	LYS	A	322	46.427	24.525	50.921	1.00	51.02	O
ATOM	4786	N	ASP	A	323	45.144	24.600	52.746	1.00	48.30	N
ATOM	4788	CA	ASP	A	323	46.253	25.036	53.583	1.00	47.80	C
ATOM	4790	CB	ASP	A	323	47.442	24.075	53.481	1.00	51.14	C
ATOM	4793	CG	ASP	A	323	47.180	22.729	54.109	1.00	53.64	C
ATOM	4794	OD1	ASP	A	323	46.376	22.621	55.075	1.00	52.75	O
ATOM	4795	OD2	ASP	A	323	47.796	21.713	53.701	1.00	58.75	O
ATOM	4796	C	ASP	A	323	46.770	26.367	53.240	1.00	45.65	C
ATOM	4797	O	ASP	A	323	47.821	26.714	53.723	1.00	47.47	O
ATOM	4798	N	SER	A	324	46.044	27.125	52.438	1.00	43.32	N
ATOM	4800	CA	SER	A	324	46.390	28.510	52.161	1.00	41.79	C
ATOM	4802	CB	SER	A	324	46.201	28.796	50.677	1.00	42.47	C
ATOM	4805	OG	SER	A	324	45.674	27.663	50.062	1.00	45.77	O
ATOM	4807	C	SER	A	324	45.537	29.476	52.905	1.00	37.75	C
ATOM	4808	O	SER	A	324	44.411	29.412	52.773	1.00	37.31	O
ATOM	4809	N	LEU	A	325	46.096	30.432	53.610	1.00	37.13	N
ATOM	4811	CA	LEU	A	325	45.334	31.298	54.493	1.00	35.04	C
ATOM	4813	CB	LEU	A	325	46.238	32.059	55.405	1.00	35.20	C
ATOM	4816	CG	LEU	A	325	47.124	31.230	56.304	1.00	38.21	C
ATOM	4818	CD1	LEU	A	325	48.006	32.088	57.155	1.00	38.14	C
ATOM	4822	CD2	LEU	A	325	46.216	30.335	57.130	1.00	38.92	C
ATOM	4826	C	LEU	A	325	44.533	32.325	53.776	1.00	33.99	C
ATOM	4827	O	LEU	A	325	43.445	32.619	54.178	1.00	32.49	O
ATOM	4828	N	SER	A	326	45.048	32.884	52.693	1.00	35.06	N
ATOM	4830	CA	SER	A	326	44.248	33.883	51.961	1.00	32.80	C
ATOM	4832	CB	SER	A	326	44.583	35.203	52.587	1.00	31.79	C
ATOM	4835	OG	SER	A	326	44.971	36.156	51.666	1.00	32.01	O

ATOM 4837	C	SER	A	326	44.404	33.929	50.432	1.00	33.06	C
ATOM 4838	O	SER	A	326	45.192	33.247	49.857	1.00	33.84	O
ATOM 4839	N	ILE	A	327	43.595	34.725	49.773	1.00	32.82	N
ATOM 4841	CA	ILE	A	327	43.767	34.943	48.360	1.00	34.47	C
ATOM 4843	CB	ILE	A	327	42.689	35.862	47.848	1.00	34.82	C
ATOM 4845	CG1	ILE	A	327	41.498	35.102	47.344	1.00	36.75	C
ATOM 4848	CD1	ILE	A	327	40.210	35.936	47.450	1.00	39.37	C
ATOM 4852	CG2	ILE	A	327	43.072	36.537	46.591	1.00	38.67	C
ATOM 4856	C	ILE	A	327	45.050	35.640	48.320	1.00	34.57	C
ATOM 4857	O	ILE	A	327	45.288	36.446	49.182	1.00	34.42	O
ATOM 4858	N	ASN	A	328	45.886	35.347	47.332	1.00	36.41	N
ATOM 4860	CA	ASN	A	328	47.298	35.754	47.372	1.00	37.37	C
ATOM 4862	CB	ASN	A	328	48.002	35.038	48.522	1.00	37.48	C
ATOM 4865	CG	ASN	A	328	48.542	33.692	48.173	1.00	39.49	C
ATOM 4866	OD1	ASN	A	328	49.033	33.448	47.064	1.00	46.88	O
ATOM 4867	ND2	ASN	A	328	48.542	32.803	49.165	1.00	39.97	N
ATOM 4870	C	ASN	A	328	48.051	35.653	46.050	1.00	39.52	C
ATOM 4871	O	ASN	A	328	47.569	35.036	45.117	1.00	40.76	O
ATOM 4872	N	ALA	A	329	49.204	36.297	45.922	1.00	41.21	N
ATOM 4874	CA	ALA	A	329	49.894	36.340	44.585	1.00	44.38	C
ATOM 4876	CB	ALA	A	329	51.307	36.867	44.702	1.00	46.80	C
ATOM 4880	C	ALA	A	329	49.981	35.028	43.836	1.00	45.40	C
ATOM 4881	O	ALA	A	329	49.799	34.986	42.642	1.00	45.54	O
ATOM 4882	N	THR	A	330	50.308	33.986	44.577	1.00	45.70	N
ATOM 4884	CA	THR	A	330	50.416	32.677	44.025	1.00	48.70	C
ATOM 4886	CB	THR	A	330	50.997	31.669	45.089	1.00	49.87	C
ATOM 4888	OG1	THR	A	330	52.331	32.048	45.543	1.00	51.51	O
ATOM 4890	CG2	THR	A	330	51.204	30.298	44.458	1.00	50.43	C
ATOM 4894	C	THR	A	330	49.057	32.212	43.479	1.00	47.89	C
ATOM 4895	O	THR	A	330	48.914	31.950	42.295	1.00	51.27	O
ATOM 4896	N	ASN	A	331	48.053	32.168	44.321	1.00	44.82	N
ATOM 4898	CA	ASN	A	331	46.806	31.518	43.978	1.00	43.96	C
ATOM 4900	CB	ASN	A	331	46.163	30.942	45.241	1.00	41.18	C
ATOM 4903	CG	ASN	A	331	45.825	32.001	46.294	1.00	38.02	C
ATOM 4904	OD1	ASN	A	331	45.247	33.040	46.021	1.00	35.91	O
ATOM 4905	ND2	ASN	A	331	46.133	31.684	47.528	1.00	38.74	N
ATOM 4908	C	ASN	A	331	45.750	32.358	43.246	1.00	44.04	C
ATOM 4909	O	ASN	A	331	44.746	31.828	42.838	1.00	43.86	O
ATOM 4910	N	ILE	A	332	45.930	33.662	43.099	1.00	43.98	N
ATOM 4912	CA	ILE	A	332	44.823	34.466	42.632	1.00	42.84	C
ATOM 4914	CB	ILE	A	332	45.126	35.929	42.836	1.00	42.58	C
ATOM 4916	CG1	ILE	A	332	44.037	36.797	42.283	1.00	44.23	C
ATOM 4919	CD1	ILE	A	332	43.052	37.052	43.195	1.00	43.72	C
ATOM 4923	CG2	ILE	A	332	46.249	36.384	42.012	1.00	47.11	C
ATOM 4927	C	ILE	A	332	44.578	34.128	41.178	1.00	45.50	C
ATOM 4928	O	ILE	A	332	43.489	34.240	40.691	1.00	45.59	O
ATOM 4929	N	LYS	A	333	45.597	33.700	40.442	1.00	49.20	N
ATOM 4931	CA	LYS	A	333	45.375	33.357	39.021	1.00	51.11	C
ATOM 4933	CB	LYS	A	333	46.690	33.013	38.339	1.00	54.36	C
ATOM 4936	CG	LYS	A	333	47.406	31.694	38.725	1.00	57.01	C
ATOM 4939	CD	LYS	A	333	48.821	31.590	37.959	1.00	62.54	C
ATOM 4942	CE	LYS	A	333	49.910	30.629	38.656	1.00	65.67	C
ATOM 4945	NZ	LYS	A	333	50.727	29.668	37.638	1.00	68.40	N
ATOM 4949	C	LYS	A	333	44.323	32.280	38.822	1.00	50.34	C
ATOM 4950	O	LYS	A	333	43.582	32.338	37.868	1.00	51.26	O
ATOM 4951	N	HIS	A	334	44.258	31.317	39.738	1.00	49.08	N
ATOM 4953	CA	HIS	A	334	43.312	30.206	39.685	1.00	49.27	C
ATOM 4955	CB	HIS	A	334	43.659	29.165	40.744	1.00	48.44	C
ATOM 4958	CG	HIS	A	334	44.980	28.524	40.539	1.00	53.18	C
ATOM 4959	ND1	HIS	A	334	45.158	27.442	39.698	1.00	59.88	N
ATOM 4961	CE1	HIS	A	334	46.441	27.119	39.674	1.00	62.27	C
ATOM 4963	NE2	HIS	A	334	47.095	27.941	40.481	1.00	59.52	N
ATOM 4965	CD2	HIS	A	334	46.199	28.819	41.045	1.00	54.75	C
ATOM 4967	C	HIS	A	334	41.853	30.601	39.909	1.00	47.75	C
ATOM 4968	O	HIS	A	334	40.986	29.750	39.847	1.00	48.67	O
ATOM 4969	N	PHE	A	335	41.579	31.874	40.217	1.00	46.14	N
ATOM 4971	CA	PHE	A	335	40.196	32.413	40.254	1.00	44.55	C
ATOM 4973	CB	PHE	A	335	40.053	33.427	41.378	1.00	41.24	C

ATOM 4976	CG	PHE	A	335	40.055	32.827	42.681	1.00	39.32	C
ATOM 4977	CD1	PHE	A	335	41.223	32.551	43.307	1.00	39.57	C
ATOM 4979	CE1	PHE	A	335	41.222	31.936	44.525	1.00	40.84	C
ATOM 4981	CZ	PHE	A	335	40.043	31.617	45.104	1.00	41.14	C
ATOM 4983	CE2	PHE	A	335	38.863	31.842	44.455	1.00	40.09	C
ATOM 4985	CD2	PHE	A	335	38.876	32.428	43.255	1.00	40.14	C
ATOM 4987	C	PHE	A	335	39.687	33.101	38.960	1.00	46.58	C
ATOM 4988	O	PHE	A	335	38.620	33.706	39.041	1.00	45.62	O
ATOM 4989	N	LYS	A	336	40.399	32.984	37.819	1.00	48.98	N
ATOM 4991	CA	LYS	A	336	40.046	33.678	36.590	1.00	51.49	C
ATOM 4993	CB	LYS	A	336	41.121	33.576	35.481	1.00	53.28	C
ATOM 5000	C	LYS	A	336	38.721	33.111	36.086	1.00	53.24	C
ATOM 5001	O	LYS	A	336	38.578	31.885	35.942	1.00	55.91	O
ATOM 5002	N	ASN	A	337	37.749	33.990	35.837	1.00	52.95	N
ATOM 5004	CA	ASN	A	337	36.461	33.566	35.321	1.00	54.28	C
ATOM 5006	CB	ASN	A	337	36.652	32.725	34.105	1.00	57.90	C
ATOM 5009	CG	ASN	A	337	37.513	33.373	33.127	1.00	61.13	C
ATOM 5010	OD1	ASN	A	337	37.278	34.525	32.791	1.00	60.64	O
ATOM 5011	ND2	ASN	A	337	38.553	32.662	32.664	1.00	67.20	N
ATOM 5014	C	ASN	A	337	35.581	32.785	36.259	1.00	52.45	C
ATOM 5015	O	ASN	A	337	34.540	32.290	35.832	1.00	52.89	O
ATOM 5016	N	CYS	A	338	35.970	32.691	37.527	1.00	49.80	N
ATOM 5018	CA	CYS	A	338	35.126	32.034	38.473	1.00	49.56	C
ATOM 5020	CB	CYS	A	338	35.803	31.803	39.799	1.00	47.52	C
ATOM 5023	SG	CYS	A	338	37.211	30.611	39.508	1.00	59.20	S
ATOM 5024	C	CYS	A	338	33.979	32.932	38.628	1.00	47.35	C
ATOM 5025	O	CYS	A	338	34.130	34.149	38.726	1.00	46.23	O
ATOM 5026	N	THR	A	339	32.834	32.301	38.627	1.00	46.93	N
ATOM 5028	CA	THR	A	339	31.599	32.968	38.809	1.00	47.23	C
ATOM 5030	CB	THR	A	339	30.770	32.593	37.622	1.00	50.51	C
ATOM 5032	OG1	THR	A	339	30.642	33.782	36.857	1.00	53.34	O
ATOM 5034	CG2	THR	A	339	29.337	32.064	37.962	1.00	50.61	C
ATOM 5038	C	THR	A	339	30.930	32.648	40.135	1.00	45.18	C
ATOM 5039	O	THR	A	339	30.247	33.470	40.689	1.00	44.47	O
ATOM 5040	N	SER	A	340	31.129	31.439	40.632	1.00	45.15	N
ATOM 5042	CA	SER	A	340	30.623	31.025	41.933	1.00	43.31	C
ATOM 5044	CB	SER	A	340	29.379	30.132	41.733	1.00	45.83	C
ATOM 5047	OG	SER	A	340	29.249	29.081	42.698	1.00	44.04	O
ATOM 5049	C	SER	A	340	31.702	30.248	42.678	1.00	41.72	C
ATOM 5050	O	SER	A	340	32.352	29.358	42.130	1.00	43.56	O
ATOM 5051	N	ILE	A	341	31.840	30.554	43.938	1.00	38.97	N
ATOM 5053	CA	ILE	A	341	32.891	30.013	44.722	1.00	38.11	C
ATOM 5055	CB	ILE	A	341	33.577	31.124	45.410	1.00	36.26	C
ATOM 5057	CG1	ILE	A	341	34.447	31.785	44.365	1.00	37.48	C
ATOM 5060	CD1	ILE	A	341	34.986	32.997	44.783	1.00	39.65	C
ATOM 5064	CG2	ILE	A	341	34.370	30.578	46.573	1.00	36.38	C
ATOM 5068	C	ILE	A	341	32.279	29.147	45.704	1.00	38.22	C
ATOM 5069	O	ILE	A	341	31.424	29.588	46.497	1.00	36.50	O
ATOM 5070	N	SER	A	342	32.702	27.897	45.679	1.00	40.02	N
ATOM 5072	CA	SER	A	342	32.138	26.946	46.612	1.00	41.56	C
ATOM 5074	CB	SER	A	342	31.753	25.639	45.909	1.00	44.24	C
ATOM 5077	OG	SER	A	342	32.513	24.550	46.357	1.00	49.61	O
ATOM 5079	C	SER	A	342	33.114	26.871	47.782	1.00	39.51	C
ATOM 5080	O	SER	A	342	34.143	26.269	47.719	1.00	40.40	O
ATOM 5081	N	GLY	A	343	32.762	27.578	48.840	1.00	38.27	N
ATOM 5083	CA	GLY	A	343	33.645	27.834	49.938	1.00	37.00	C
ATOM 5086	C	GLY	A	343	33.681	29.322	50.263	1.00	35.53	C
ATOM 5087	O	GLY	A	343	32.754	30.074	49.877	1.00	34.59	O
ATOM 5088	N	ASP	A	344	34.775	29.727	50.970	1.00	34.54	N
ATOM 5090	CA	ASP	A	344	34.920	31.070	51.544	1.00	32.00	C
ATOM 5092	CB	ASP	A	344	35.234	30.977	53.032	1.00	31.72	C
ATOM 5095	CG	ASP	A	344	34.574	29.830	53.703	1.00	34.32	C
ATOM 5096	OD1	ASP	A	344	33.317	29.772	53.622	1.00	41.66	O
ATOM 5097	OD2	ASP	A	344	35.178	28.928	54.346	1.00	35.55	O
ATOM 5098	C	ASP	A	344	36.025	31.826	50.797	1.00	30.48	C
ATOM 5099	O	ASP	A	344	36.853	31.209	50.204	1.00	31.17	O
ATOM 5100	N	LEU	A	345	35.995	33.146	50.824	1.00	28.65	N
ATOM 5102	CA	LEU	A	345	37.056	33.969	50.344	1.00	29.65	C

ATOM 5104	CB	LEU	A	345	36.479	34.951	49.381	1.00	31.28	C
ATOM 5107	CG	LEU	A	345	36.877	35.111	47.916	1.00	34.49	C
ATOM 5109	CD1	LEU	A	345	37.260	33.825	47.393	1.00	39.14	C
ATOM 5113	CD2	LEU	A	345	35.690	35.571	47.155	1.00	33.77	C
ATOM 5117	C	LEU	A	345	37.580	34.737	51.548	1.00	29.18	C
ATOM 5118	O	LEU	A	345	36.784	35.296	52.295	1.00	29.37	O
ATOM 5119	N	HIS	A	346	38.882	34.655	51.810	1.00	29.00	N
ATOM 5121	CA	HIS	A	346	39.552	35.409	52.838	1.00	28.13	C
ATOM 5123	CB	HIS	A	346	40.486	34.542	53.655	1.00	29.47	C
ATOM 5126	CG	HIS	A	346	39.875	33.338	54.278	1.00	30.10	C
ATOM 5127	ND1	HIS	A	346	38.833	33.396	55.118	1.00	35.14	N
ATOM 5129	CE1	HIS	A	346	38.538	32.196	55.572	1.00	35.47	C
ATOM 5131	NE2	HIS	A	346	39.391	31.361	55.089	1.00	32.97	N
ATOM 5133	CD2	HIS	A	346	40.268	32.060	54.311	1.00	36.36	C
ATOM 5135	C	HIS	A	346	40.552	36.345	52.173	1.00	29.15	C
ATOM 5136	O	HIS	A	346	41.448	35.896	51.405	1.00	29.88	O
ATOM 5137	N	ILE	A	347	40.509	37.629	52.497	1.00	28.56	N
ATOM 5139	CA	ILE	A	347	41.537	38.505	52.005	1.00	28.80	C
ATOM 5141	CB	ILE	A	347	40.914	39.548	51.175	1.00	28.20	C
ATOM 5143	CG1	ILE	A	347	40.355	38.876	49.939	1.00	28.97	C
ATOM 5146	CD1	ILE	A	347	39.286	39.729	49.225	1.00	31.16	C
ATOM 5150	CG2	ILE	A	347	41.951	40.589	50.781	1.00	29.70	C
ATOM 5154	C	ILE	A	347	42.248	39.072	53.183	1.00	28.89	C
ATOM 5155	O	ILE	A	347	41.697	39.924	53.810	1.00	29.99	O
ATOM 5156	N	LEU	A	348	43.443	38.605	53.524	1.00	30.00	N
ATOM 5158	CA	LEU	A	348	44.077	39.025	54.787	1.00	30.57	C
ATOM 5160	CB	LEU	A	348	44.555	37.886	55.605	1.00	30.53	C
ATOM 5163	CG	LEU	A	348	43.596	36.715	55.576	1.00	31.50	C
ATOM 5165	CD1	LEU	A	348	44.246	35.482	56.211	1.00	32.92	C
ATOM 5169	CD2	LEU	A	348	42.330	37.083	56.215	1.00	31.99	C
ATOM 5173	C	LEU	A	348	45.246	39.881	54.475	1.00	32.43	C
ATOM 5174	O	LEU	A	348	45.607	39.970	53.337	1.00	34.49	O
ATOM 5175	N	PRO	A	349	45.778	40.592	55.455	1.00	32.87	N
ATOM 5176	CA	PRO	A	349	46.973	41.381	55.264	1.00	33.99	C
ATOM 5178	CB	PRO	A	349	47.271	41.886	56.659	1.00	34.22	C
ATOM 5181	CG	PRO	A	349	45.966	42.137	57.153	1.00	34.18	C
ATOM 5184	CD	PRO	A	349	45.163	40.881	56.755	1.00	32.82	C
ATOM 5187	C	PRO	A	349	48.124	40.614	54.726	1.00	35.54	C
ATOM 5188	O	PRO	A	349	48.893	41.228	53.933	1.00	37.23	O
ATOM 5189	N	VAL	A	350	48.295	39.356	55.124	1.00	35.44	N
ATOM 5191	CA	VAL	A	350	49.450	38.608	54.559	1.00	37.52	C
ATOM 5193	CB	VAL	A	350	49.454	37.117	54.856	1.00	37.63	C
ATOM 5195	CG1	VAL	A	350	50.325	36.871	55.983	1.00	39.53	C
ATOM 5199	CG2	VAL	A	350	48.030	36.560	55.008	1.00	35.14	C
ATOM 5203	C	VAL	A	350	49.551	38.672	53.016	1.00	37.28	C
ATOM 5204	O	VAL	A	350	50.644	38.668	52.452	1.00	37.00	O
ATOM 5205	N	ALA	A	351	48.386	38.692	52.387	1.00	34.61	N
ATOM 5207	CA	ALA	A	351	48.304	38.858	50.982	1.00	35.88	C
ATOM 5209	CB	ALA	A	351	46.880	39.055	50.584	1.00	34.44	C
ATOM 5213	C	ALA	A	351	49.136	40.024	50.514	1.00	37.47	C
ATOM 5214	O	ALA	A	351	50.006	39.864	49.710	1.00	38.97	O
ATOM 5215	N	PHE	A	352	48.843	41.210	51.010	1.00	37.79	N
ATOM 5217	CA	PHE	A	352	49.495	42.407	50.491	1.00	39.28	C
ATOM 5219	CB	PHE	A	352	48.674	43.607	50.839	1.00	37.35	C
ATOM 5222	CG	PHE	A	352	47.296	43.459	50.390	1.00	35.68	C
ATOM 5223	CD1	PHE	A	352	46.310	43.146	51.249	1.00	35.62	C
ATOM 5225	CE1	PHE	A	352	45.040	42.971	50.821	1.00	35.56	C
ATOM 5227	CZ	PHE	A	352	44.760	43.037	49.504	1.00	37.20	C
ATOM 5229	CE2	PHE	A	352	45.774	43.277	48.616	1.00	38.11	C
ATOM 5231	CD2	PHE	A	352	47.016	43.468	49.070	1.00	38.39	C
ATOM 5233	C	PHE	A	352	50.912	42.564	50.942	1.00	42.10	C
ATOM 5234	O	PHE	A	352	51.661	43.264	50.308	1.00	45.13	O
ATOM 5235	N	ARG	A	353	51.318	41.916	52.018	1.00	42.10	N
ATOM 5237	CA	ARG	A	353	52.706	42.048	52.408	1.00	44.35	C
ATOM 5239	CB	ARG	A	353	52.810	42.476	53.863	1.00	44.18	C
ATOM 5242	CG	ARG	A	353	52.838	41.475	54.889	1.00	45.56	C
ATOM 5245	CD	ARG	A	353	52.340	41.993	56.328	1.00	46.05	C
ATOM 5248	NE	ARG	A	353	51.908	40.792	57.076	1.00	48.23	N

ATOM	5250	CZ	ARG	A	353	50.904	40.702	57.958	1.00	49.69	C
ATOM	5251	NH1	ARG	A	353	50.159	41.766	58.367	1.00	48.00	N
ATOM	5254	NH2	ARG	A	353	50.644	39.490	58.462	1.00	51.85	N
ATOM	5257	C	ARG	A	353	53.606	40.883	52.034	1.00	45.87	C
ATOM	5258	O	ARG	A	353	54.793	40.995	52.113	1.00	49.79	O
ATOM	5259	N	GLY	A	354	53.077	39.819	51.471	1.00	44.58	N
ATOM	5261	CA	GLY	A	354	53.844	38.608	51.326	1.00	45.57	C
ATOM	5264	C	GLY	A	354	54.077	37.881	52.646	1.00	45.59	C
ATOM	5265	O	GLY	A	354	53.795	38.404	53.757	1.00	44.40	O
ATOM	5266	N	ASP	A	355	54.560	36.657	52.489	1.00	47.02	N
ATOM	5268	CA	ASP	A	355	54.875	35.747	53.559	1.00	49.26	C
ATOM	5270	CB	ASP	A	355	53.675	34.810	53.761	1.00	47.45	C
ATOM	5273	CG	ASP	A	355	53.819	33.857	54.999	1.00	52.55	C
ATOM	5274	OD1	ASP	A	355	54.748	33.966	55.843	1.00	52.58	O
ATOM	5275	OD2	ASP	A	355	52.964	32.945	55.218	1.00	57.12	O
ATOM	5276	C	ASP	A	355	56.184	34.963	53.184	1.00	52.90	C
ATOM	5277	O	ASP	A	355	56.230	34.283	52.193	1.00	53.38	O
ATOM	5278	N	SER	A	356	57.257	35.097	53.951	1.00	55.22	N
ATOM	5280	CA	SER	A	356	58.449	34.379	53.620	1.00	59.39	C
ATOM	5282	CB	SER	A	356	59.693	35.013	54.276	1.00	62.91	C
ATOM	5285	OG	SER	A	356	59.657	34.911	55.688	1.00	63.67	O
ATOM	5287	C	SER	A	356	58.280	32.920	54.042	1.00	59.92	C
ATOM	5288	O	SER	A	356	58.935	31.998	53.497	1.00	62.62	O
ATOM	5289	N	PHE	A	357	57.411	32.695	55.015	1.00	57.30	N
ATOM	5291	CA	PHE	A	357	57.303	31.355	55.591	1.00	58.59	C
ATOM	5293	CB	PHE	A	357	56.605	31.427	56.964	1.00	57.36	C
ATOM	5296	CG	PHE	A	357	57.294	32.421	57.919	1.00	60.90	C
ATOM	5297	CD1	PHE	A	357	56.748	33.697	58.164	1.00	59.90	C
ATOM	5299	CE1	PHE	A	357	57.381	34.597	59.001	1.00	62.61	C
ATOM	5301	CZ	PHE	A	357	58.620	34.277	59.612	1.00	66.42	C
ATOM	5303	CE2	PHE	A	357	59.197	33.034	59.358	1.00	70.78	C
ATOM	5305	CD2	PHE	A	357	58.530	32.102	58.516	1.00	68.20	C
ATOM	5307	C	PHE	A	357	56.638	30.400	54.612	1.00	57.26	C
ATOM	5308	O	PHE	A	357	56.959	29.213	54.566	1.00	59.38	O
ATOM	5309	N	THR	A	358	55.781	30.990	53.792	1.00	53.74	N
ATOM	5311	CA	THR	A	358	54.993	30.317	52.788	1.00	52.07	C
ATOM	5313	CB	THR	A	358	53.638	30.968	52.871	1.00	48.69	C
ATOM	5315	OG1	THR	A	358	52.917	30.251	53.847	1.00	49.41	O
ATOM	5317	CG2	THR	A	358	52.782	30.701	51.766	1.00	49.09	C
ATOM	5321	C	THR	A	358	55.512	30.469	51.384	1.00	52.42	C
ATOM	5322	O	THR	A	358	54.936	29.873	50.469	1.00	50.78	O
ATOM	5323	N	HIS	A	359	56.595	31.258	51.252	1.00	53.66	N
ATOM	5325	CA	HIS	A	359	57.166	31.739	49.989	1.00	54.99	C
ATOM	5327	CB	HIS	A	359	57.756	30.604	49.243	1.00	57.50	C
ATOM	5330	CG	HIS	A	359	58.370	29.588	50.107	1.00	58.68	C
ATOM	5331	ND1	HIS	A	359	59.709	29.584	50.363	1.00	63.58	N
ATOM	5333	CE1	HIS	A	359	60.000	28.539	51.119	1.00	64.70	C
ATOM	5335	NE2	HIS	A	359	58.883	27.896	51.392	1.00	61.34	N
ATOM	5337	CD2	HIS	A	359	57.855	28.510	50.738	1.00	58.13	C
ATOM	5339	C	HIS	A	359	56.194	32.451	49.042	1.00	52.38	C
ATOM	5340	O	HIS	A	359	56.192	32.210	47.892	1.00	53.48	O
ATOM	5341	N	THR	A	360	55.402	33.359	49.534	1.00	50.00	N
ATOM	5343	CA	THR	A	360	54.434	34.040	48.722	1.00	48.70	C
ATOM	5345	CB	THR	A	360	53.195	33.835	49.430	1.00	45.16	C
ATOM	5347	OG1	THR	A	360	52.938	32.444	49.359	1.00	46.70	O
ATOM	5349	CG2	THR	A	360	52.036	34.453	48.731	1.00	44.91	C
ATOM	5353	C	THR	A	360	54.786	35.512	48.561	1.00	48.92	C
ATOM	5354	O	THR	A	360	54.978	36.188	49.533	1.00	48.33	O
ATOM	5355	N	PRO	A	361	55.010	35.986	47.351	1.00	50.79	N
ATOM	5356	CA	PRO	A	361	55.426	37.375	47.190	1.00	51.83	C
ATOM	5358	CB	PRO	A	361	55.759	37.484	45.706	1.00	54.65	C
ATOM	5361	CG	PRO	A	361	55.333	36.260	45.089	1.00	54.61	C
ATOM	5364	CD	PRO	A	361	55.017	35.248	46.088	1.00	52.35	C
ATOM	5367	C	PRO	A	361	54.285	38.263	47.500	1.00	48.71	C
ATOM	5368	O	PRO	A	361	53.182	37.783	47.427	1.00	47.40	O
ATOM	5369	N	PRO	A	362	54.507	39.526	47.794	1.00	48.27	N
ATOM	5370	CA	PRO	A	362	53.421	40.468	47.950	1.00	46.05	C
ATOM	5372	CB	PRO	A	362	54.162	41.791	48.029	1.00	47.43	C

ATOM 5375	CG	PRO	A	362	55.417	41.523	47.789	1.00	49.64	C
ATOM 5378	CD	PRO	A	362	55.780	40.167	48.028	1.00	50.35	C
ATOM 5381	C	PRO	A	362	52.473	40.437	46.765	1.00	45.74	C
ATOM 5382	O	PRO	A	362	52.943	40.284	45.696	1.00	49.40	O
ATOM 5383	N	LEU	A	363	51.189	40.595	46.966	1.00	44.33	N
ATOM 5385	CA	LEU	A	363	50.174	40.533	45.920	1.00	44.66	C
ATOM 5387	CB	LEU	A	363	48.831	40.112	46.510	1.00	41.08	C
ATOM 5390	CG	LEU	A	363	47.517	40.078	45.722	1.00	40.32	C
ATOM 5392	CD1	LEU	A	363	47.505	39.026	44.654	1.00	41.76	C
ATOM 5396	CD2	LEU	A	363	46.293	39.759	46.643	1.00	37.90	C
ATOM 5400	C	LEU	A	363	49.957	41.904	45.321	1.00	46.91	C
ATOM 5401	O	LEU	A	363	49.602	42.858	46.011	1.00	46.28	O
ATOM 5402	N	ASP	A	364	50.142	41.990	44.006	1.00	50.07	N
ATOM 5404	CA	ASP	A	364	49.742	43.191	43.278	1.00	50.91	C
ATOM 5406	CB	ASP	A	364	50.197	43.079	41.819	1.00	54.23	C
ATOM 5409	CG	ASP	A	364	49.881	44.322	40.987	1.00	56.02	C
ATOM 5410	OD1	ASP	A	364	49.213	45.282	41.502	1.00	50.42	O
ATOM 5411	OD2	ASP	A	364	50.278	44.378	39.776	1.00	60.00	O
ATOM 5412	C	ASP	A	364	48.221	43.399	43.404	1.00	47.27	C
ATOM 5413	O	ASP	A	364	47.433	42.672	42.883	1.00	45.88	O
ATOM 5414	N	PRO	A	365	47.821	44.436	44.058	1.00	46.25	N
ATOM 5415	CA	PRO	A	365	46.404	44.751	44.166	1.00	45.25	C
ATOM 5417	CB	PRO	A	365	46.408	46.030	44.972	1.00	45.77	C
ATOM 5420	CG	PRO	A	365	47.706	45.971	45.683	1.00	46.71	C
ATOM 5423	CD	PRO	A	365	48.660	45.428	44.709	1.00	47.17	C
ATOM 5426	C	PRO	A	365	45.610	45.003	42.889	1.00	47.18	C
ATOM 5427	O	PRO	A	365	44.431	44.806	43.003	1.00	46.77	O
ATOM 5428	N	GLN	A	366	46.155	45.502	41.778	1.00	50.90	N
ATOM 5430	CA	GLN	A	366	45.415	45.498	40.507	1.00	52.74	C
ATOM 5432	CB	GLN	A	366	46.289	45.759	39.264	1.00	56.32	C
ATOM 5439	C	GLN	A	366	44.779	44.131	40.329	1.00	51.62	C
ATOM 5440	O	GLN	A	366	43.737	44.006	39.686	1.00	53.12	O
ATOM 5441	N	GLU	A	367	45.392	43.090	40.873	1.00	49.93	N
ATOM 5443	CA	GLU	A	367	44.957	41.743	40.530	1.00	49.07	C
ATOM 5445	CB	GLU	A	367	46.016	40.748	40.955	1.00	49.47	C
ATOM 5448	CG	GLU	A	367	47.254	40.827	40.170	1.00	55.32	C
ATOM 5451	CD	GLU	A	367	47.521	39.537	39.415	1.00	65.30	C
ATOM 5452	OE1	GLU	A	367	47.045	39.472	38.236	1.00	71.91	O
ATOM 5453	OE2	GLU	A	367	48.219	38.601	39.984	1.00	69.48	O
ATOM 5454	C	GLU	A	367	43.609	41.341	41.121	1.00	44.37	C
ATOM 5455	O	GLU	A	367	43.026	40.320	40.783	1.00	43.44	O
ATOM 5456	N	LEU	A	368	43.146	42.122	42.045	1.00	41.59	N
ATOM 5458	CA	LEU	A	368	41.862	41.872	42.622	1.00	39.34	C
ATOM 5460	CB	LEU	A	368	41.649	42.755	43.821	1.00	37.40	C
ATOM 5463	CG	LEU	A	368	42.571	42.306	44.922	1.00	37.05	C
ATOM 5465	CD1	LEU	A	368	42.591	43.311	46.006	1.00	37.85	C
ATOM 5469	CD2	LEU	A	368	42.136	40.982	45.456	1.00	37.21	C
ATOM 5473	C	LEU	A	368	40.775	42.088	41.612	1.00	40.58	C
ATOM 5474	O	LEU	A	368	39.749	41.513	41.759	1.00	39.88	O
ATOM 5475	N	ASP	A	369	41.013	42.861	40.558	1.00	44.30	N
ATOM 5477	CA	ASP	A	369	40.101	42.958	39.417	1.00	46.16	C
ATOM 5479	CB	ASP	A	369	40.752	43.678	38.251	1.00	50.23	C
ATOM 5482	CG	ASP	A	369	41.010	45.227	38.506	1.00	55.84	C
ATOM 5483	OD1	ASP	A	369	40.507	45.849	39.505	1.00	57.91	O
ATOM 5484	OD2	ASP	A	369	41.782	45.893	37.753	1.00	60.79	O
ATOM 5485	C	ASP	A	369	39.621	41.612	38.939	1.00	45.71	C
ATOM 5486	O	ASP	A	369	38.531	41.537	38.475	1.00	46.84	O
ATOM 5487	N	ILE	A	370	40.412	40.553	39.067	1.00	45.58	N
ATOM 5489	CA	ILE	A	370	40.011	39.148	38.769	1.00	46.13	C
ATOM 5491	CB	ILE	A	370	41.135	38.210	39.219	1.00	46.46	C
ATOM 5493	CG1	ILE	A	370	42.075	37.803	38.072	1.00	50.66	C
ATOM 5496	CD1	ILE	A	370	43.582	37.835	38.532	1.00	51.51	C
ATOM 5500	CG2	ILE	A	370	40.622	36.949	39.735	1.00	47.70	C
ATOM 5504	C	ILE	A	370	38.727	38.626	39.419	1.00	43.97	C
ATOM 5505	O	ILE	A	370	37.935	37.986	38.824	1.00	45.31	O
ATOM 5506	N	LEU	A	371	38.532	38.885	40.675	1.00	41.68	N
ATOM 5508	CA	LEU	A	371	37.290	38.530	41.354	1.00	39.69	C
ATOM 5510	CB	LEU	A	371	37.476	38.789	42.863	1.00	37.02	C

ATOM 5513	CG	LEU	A	371	38.785	38.136	43.352	1.00	36.34	C
ATOM 5515	CD1	LEU	A	371	39.215	38.574	44.651	1.00	34.34	C
ATOM 5519	CD2	LEU	A	371	38.586	36.658	43.371	1.00	38.01	C
ATOM 5523	C	LEU	A	371	36.031	39.257	40.875	1.00	40.31	C
ATOM 5524	O	LEU	A	371	34.962	38.940	41.363	1.00	38.85	O
ATOM 5525	N	LYS	A	372	36.131	40.222	39.959	1.00	42.21	N
ATOM 5527	CA	LYS	A	372	34.932	40.898	39.422	1.00	43.84	C
ATOM 5529	CB	LYS	A	372	35.285	41.942	38.377	1.00	46.36	C
ATOM 5532	CG	LYS	A	372	35.513	43.305	38.954	1.00	47.88	C
ATOM 5535	CD	LYS	A	372	36.436	44.155	38.058	1.00	51.39	C
ATOM 5538	CE	LYS	A	372	36.918	45.449	38.779	1.00	53.07	C
ATOM 5541	NZ	LYS	A	372	38.090	46.150	38.045	1.00	59.80	N
ATOM 5545	C	LYS	A	372	33.950	39.980	38.766	1.00	44.83	C
ATOM 5546	O	LYS	A	372	32.860	40.345	38.495	1.00	45.62	O
ATOM 5547	N	THR	A	373	34.355	38.775	38.458	1.00	46.35	N
ATOM 5549	CA	THR	A	373	33.487	37.815	37.799	1.00	47.94	C
ATOM 5551	CB	THR	A	373	34.382	36.802	37.192	1.00	48.66	C
ATOM 5553	OG1	THR	A	373	35.052	37.419	36.130	1.00	51.06	O
ATOM 5555	CG2	THR	A	373	33.564	35.865	36.391	1.00	55.55	C
ATOM 5559	C	THR	A	373	32.508	37.084	38.700	1.00	45.96	C
ATOM 5560	O	THR	A	373	31.617	36.372	38.216	1.00	48.41	O
ATOM 5561	N	VAL	A	374	32.706	37.253	39.998	1.00	42.63	N
ATOM 5563	CA	VAL	A	374	32.140	36.424	41.020	1.00	40.86	C
ATOM 5565	CB	VAL	A	374	33.088	36.339	42.283	1.00	38.33	C
ATOM 5567	CG1	VAL	A	374	32.534	35.381	43.293	1.00	37.92	C
ATOM 5571	CG2	VAL	A	374	34.458	35.804	41.921	1.00	38.98	C
ATOM 5575	C	VAL	A	374	30.751	36.893	41.416	1.00	40.06	C
ATOM 5576	O	VAL	A	374	30.539	38.005	41.826	1.00	39.99	O
ATOM 5577	N	LYS	A	375	29.823	35.983	41.353	1.00	40.81	N
ATOM 5579	CA	LYS	A	375	28.452	36.273	41.649	1.00	42.35	C
ATOM 5581	CB	LYS	A	375	27.541	35.795	40.477	1.00	46.59	C
ATOM 5584	CG	LYS	A	375	27.777	36.549	39.090	1.00	50.24	C
ATOM 5587	CD	LYS	A	375	26.669	36.227	38.059	1.00	57.80	C
ATOM 5590	CE	LYS	A	375	27.128	36.178	36.545	1.00	62.46	C
ATOM 5593	NZ	LYS	A	375	26.016	36.062	35.526	1.00	61.68	N
ATOM 5597	C	LYS	A	375	28.008	35.654	42.952	1.00	40.06	C
ATOM 5598	O	LYS	A	375	27.173	36.205	43.624	1.00	39.08	O
ATOM 5599	N	GLU	A	376	28.528	34.503	43.309	1.00	39.23	N
ATOM 5601	CA	GLU	A	376	28.081	33.914	44.552	1.00	39.53	C
ATOM 5603	CB	GLU	A	376	26.947	32.867	44.334	1.00	41.78	C
ATOM 5606	CG	GLU	A	376	27.373	31.519	43.819	1.00	44.47	C
ATOM 5609	CD	GLU	A	376	26.253	30.494	43.764	1.00	47.77	C
ATOM 5610	OE1	GLU	A	376	25.436	30.495	44.646	1.00	51.29	O
ATOM 5611	OE2	GLU	A	376	26.180	29.681	42.851	1.00	49.03	O
ATOM 5612	C	GLU	A	376	29.214	33.326	45.341	1.00	37.53	C
ATOM 5613	O	GLU	A	376	30.135	32.819	44.752	1.00	38.28	O
ATOM 5614	N	LEU	A	377	29.159	33.465	46.662	1.00	35.71	N
ATOM 5616	CA	LEU	A	377	29.980	32.695	47.555	1.00	35.03	C
ATOM 5618	CB	LEU	A	377	30.888	33.582	48.445	1.00	32.95	C
ATOM 5621	CG	LEU	A	377	31.383	34.875	47.722	1.00	32.32	C
ATOM 5623	CD1	LEU	A	377	32.373	35.705	48.488	1.00	30.13	C
ATOM 5627	CD2	LEU	A	377	32.034	34.537	46.491	1.00	36.27	C
ATOM 5631	C	LEU	A	377	29.001	31.854	48.361	1.00	36.88	C
ATOM 5632	O	LEU	A	377	28.064	32.351	48.983	1.00	37.14	O
ATOM 5633	N	THR	A	378	29.199	30.548	48.278	1.00	38.82	N
ATOM 5635	CA	THR	A	378	28.558	29.513	49.108	1.00	39.57	C
ATOM 5637	CB	THR	A	378	29.221	28.290	48.593	1.00	41.13	C
ATOM 5639	OG1	THR	A	378	28.353	27.866	47.593	1.00	41.94	O
ATOM 5641	CG2	THR	A	378	29.395	27.056	49.550	1.00	44.08	C
ATOM 5645	C	THR	A	378	28.753	29.721	50.604	1.00	37.78	C
ATOM 5646	O	THR	A	378	27.843	29.535	51.415	1.00	36.72	O
ATOM 5647	N	GLY	A	379	29.962	30.195	50.908	1.00	36.56	N
ATOM 5649	CA	GLY	A	379	30.487	30.357	52.264	1.00	35.72	C
ATOM 5652	C	GLY	A	379	30.468	31.774	52.761	1.00	33.26	C
ATOM 5653	O	GLY	A	379	29.453	32.421	52.744	1.00	34.48	O
ATOM 5654	N	PHE	A	380	31.604	32.269	53.181	1.00	31.43	N
ATOM 5656	CA	PHE	A	380	31.641	33.606	53.748	1.00	30.14	C
ATOM 5658	CB	PHE	A	380	31.949	33.563	55.237	1.00	29.78	C

ATOM 5661	CG	PHE	A	380	33.326	33.040	55.606	1.00	28.19	C
ATOM 5662	CD1	PHE	A	380	34.468	33.856	55.512	1.00	26.22	C
ATOM 5664	CE1	PHE	A	380	35.680	33.405	55.974	1.00	25.15	C
ATOM 5666	CZ	PHE	A	380	35.755	32.140	56.510	1.00	26.34	C
ATOM 5668	CE2	PHE	A	380	34.631	31.325	56.573	1.00	27.52	C
ATOM 5670	CD2	PHE	A	380	33.459	31.771	56.148	1.00	27.63	C
ATOM 5672	C	PHE	A	380	32.649	34.455	53.086	1.00	28.80	C
ATOM 5673	O	PHE	A	380	33.535	33.928	52.414	1.00	30.25	O
ATOM 5674	N	LEU	A	381	32.580	35.737	53.345	1.00	26.76	N
ATOM 5676	CA	LEU	A	381	33.462	36.629	52.687	1.00	27.56	C
ATOM 5678	CB	LEU	A	381	32.671	37.545	51.773	1.00	27.59	C
ATOM 5681	CG	LEU	A	381	33.418	38.759	51.282	1.00	28.54	C
ATOM 5683	CD1	LEU	A	381	34.748	38.298	50.721	1.00	30.46	C
ATOM 5687	CD2	LEU	A	381	32.616	39.439	50.209	1.00	32.21	C
ATOM 5691	C	LEU	A	381	34.189	37.411	53.743	1.00	27.21	C
ATOM 5692	O	LEU	A	381	33.594	38.246	54.431	1.00	28.39	O
ATOM 5693	N	LEU	A	382	35.471	37.202	53.868	1.00	26.93	N
ATOM 5695	CA	LEU	A	382	36.188	37.838	54.953	1.00	27.83	C
ATOM 5697	CB	LEU	A	382	36.849	36.750	55.764	1.00	28.01	C
ATOM 5700	CG	LEU	A	382	37.909	37.206	56.753	1.00	29.87	C
ATOM 5702	CD1	LEU	A	382	37.249	38.057	57.829	1.00	31.23	C
ATOM 5706	CD2	LEU	A	382	38.571	36.020	57.423	1.00	29.60	C
ATOM 5710	C	LEU	A	382	37.239	38.826	54.424	1.00	27.94	C
ATOM 5711	O	LEU	A	382	38.189	38.425	53.770	1.00	28.55	O
ATOM 5712	N	ILE	A	383	37.106	40.104	54.738	1.00	28.44	N
ATOM 5714	CA	ILE	A	383	37.992	41.136	54.168	1.00	29.01	C
ATOM 5716	CB	ILE	A	383	37.182	42.076	53.298	1.00	30.11	C
ATOM 5718	CG1	ILE	A	383	36.362	41.266	52.311	1.00	31.00	C
ATOM 5721	CD1	ILE	A	383	35.938	42.136	51.127	1.00	32.70	C
ATOM 5725	CG2	ILE	A	383	38.119	43.072	52.508	1.00	29.84	C
ATOM 5729	C	ILE	A	383	38.695	41.952	55.210	1.00	28.25	C
ATOM 5730	O	ILE	A	383	38.130	42.865	55.743	1.00	27.90	O
ATOM 5731	N	GLN	A	384	39.944	41.635	55.486	1.00	28.72	N
ATOM 5733	CA	GLN	A	384	40.640	42.232	56.611	1.00	28.78	C
ATOM 5735	CB	GLN	A	384	41.213	41.148	57.429	1.00	28.34	C
ATOM 5738	CG	GLN	A	384	40.192	40.473	58.315	1.00	27.69	C
ATOM 5741	CD	GLN	A	384	40.787	39.489	59.310	1.00	25.79	C
ATOM 5742	OE1	GLN	A	384	41.947	39.167	59.277	1.00	29.42	O
ATOM 5743	NE2	GLN	A	384	39.997	39.070	60.220	1.00	29.85	N
ATOM 5746	C	GLN	A	384	41.735	43.122	56.073	1.00	30.69	C
ATOM 5747	O	GLN	A	384	42.402	43.817	56.826	1.00	33.98	O
ATOM 5748	N	ALA	A	385	41.892	43.164	54.756	1.00	30.13	N
ATOM 5750	CA	ALA	A	385	42.856	44.036	54.126	1.00	30.49	C
ATOM 5752	CB	ALA	A	385	44.242	43.332	54.044	1.00	30.62	C
ATOM 5756	C	ALA	A	385	42.348	44.372	52.728	1.00	31.09	C
ATOM 5757	O	ALA	A	385	41.586	43.598	52.083	1.00	30.22	O
ATOM 5758	N	TRP	A	386	42.808	45.504	52.232	1.00	32.17	N
ATOM 5760	CA	TRP	A	386	42.343	45.986	50.991	1.00	33.08	C
ATOM 5762	CB	TRP	A	386	40.903	46.412	51.231	1.00	32.74	C
ATOM 5765	CG	TRP	A	386	40.173	46.579	50.012	1.00	36.40	C
ATOM 5766	CD1	TRP	A	386	39.885	47.756	49.354	1.00	40.08	C
ATOM 5768	NE1	TRP	A	386	39.158	47.478	48.227	1.00	40.21	N
ATOM 5770	CE2	TRP	A	386	39.049	46.114	48.114	1.00	40.12	C
ATOM 5771	CD2	TRP	A	386	39.676	45.539	49.213	1.00	35.62	C
ATOM 5772	CE3	TRP	A	386	39.657	44.174	49.339	1.00	34.88	C
ATOM 5774	CZ3	TRP	A	386	39.049	43.446	48.400	1.00	37.08	C
ATOM 5776	CH2	TRP	A	386	38.429	44.025	47.329	1.00	39.08	C
ATOM 5778	CZ2	TRP	A	386	38.425	45.359	47.159	1.00	42.51	C
ATOM 5780	C	TRP	A	386	43.127	47.177	50.563	1.00	34.61	C
ATOM 5781	O	TRP	A	386	43.390	48.039	51.341	1.00	37.82	O
ATOM 5782	N	PRO	A	387	43.434	47.332	49.320	1.00	36.03	N
ATOM 5783	CA	PRO	A	387	44.281	48.435	48.949	1.00	38.07	C
ATOM 5785	CB	PRO	A	387	44.323	48.312	47.443	1.00	39.84	C
ATOM 5788	CG	PRO	A	387	43.252	47.516	47.081	1.00	38.50	C
ATOM 5791	CD	PRO	A	387	42.989	46.569	48.156	1.00	36.66	C
ATOM 5794	C	PRO	A	387	43.736	49.784	49.409	1.00	39.23	C
ATOM 5795	O	PRO	A	387	42.603	50.184	49.169	1.00	39.83	O
ATOM 5796	N	GLU	A	388	44.573	50.483	50.137	1.00	41.44	N



ATOM	5798	CA	GLU	A	388	44.233	51.765	50.763	1.00	43.29	C
ATOM	5800	CB	GLU	A	388	45.383	52.255	51.622	1.00	45.21	C
ATOM	5803	CG	GLU	A	388	45.567	51.443	52.897	1.00	45.28	C
ATOM	5806	CD	GLU	A	388	46.796	51.891	53.654	1.00	52.65	C
ATOM	5807	OE1	GLU	A	388	47.893	51.297	53.459	1.00	53.52	O
ATOM	5808	OE2	GLU	A	388	46.653	52.891	54.420	1.00	57.96	O
ATOM	5809	C	GLU	A	388	43.796	52.887	49.862	1.00	45.35	C
ATOM	5810	O	GLU	A	388	43.063	53.764	50.284	1.00	45.89	O
ATOM	5811	N	ASN	A	389	44.170	52.836	48.609	1.00	47.38	N
ATOM	5813	CA	ASN	A	389	43.678	53.842	47.663	1.00	50.51	C
ATOM	5815	CB	ASN	A	389	44.805	54.240	46.668	1.00	54.16	C
ATOM	5818	CG	ASN	A	389	45.254	53.045	45.796	1.00	56.14	C
ATOM	5819	OD1	ASN	A	389	45.805	52.052	46.328	1.00	62.07	O
ATOM	5820	ND2	ASN	A	389	44.886	53.055	44.521	1.00	57.83	N
ATOM	5823	C	ASN	A	389	42.455	53.391	46.860	1.00	49.44	C
ATOM	5824	O	ASN	A	389	42.303	53.859	45.756	1.00	52.95	O
ATOM	5825	N	ARG	A	390	41.611	52.494	47.344	1.00	46.09	N
ATOM	5827	CA	ARG	A	390	40.371	52.217	46.649	1.00	46.76	C
ATOM	5829	CB	ARG	A	390	40.234	50.742	46.244	1.00	45.10	C
ATOM	5832	CG	ARG	A	390	41.217	50.172	45.285	1.00	47.34	C
ATOM	5835	CD	ARG	A	390	41.438	50.956	43.977	1.00	53.54	C
ATOM	5838	NE	ARG	A	390	40.695	50.412	42.824	1.00	53.39	N
ATOM	5840	CZ	ARG	A	390	39.518	50.880	42.393	1.00	54.47	C
ATOM	5841	NH1	ARG	A	390	38.862	51.878	43.014	1.00	59.31	N
ATOM	5844	NH2	ARG	A	390	38.951	50.325	41.362	1.00	52.63	N
ATOM	5847	C	ARG	A	390	39.172	52.536	47.545	1.00	46.14	C
ATOM	5848	O	ARG	A	390	38.999	51.940	48.589	1.00	44.17	O
ATOM	5849	N	THR	A	391	38.283	53.411	47.114	1.00	48.34	N
ATOM	5851	CA	THR	A	391	37.246	53.899	48.039	1.00	47.56	C
ATOM	5853	CB	THR	A	391	36.645	55.201	47.543	1.00	50.22	C
ATOM	5855	OG1	THR	A	391	35.870	54.878	46.403	1.00	51.02	O
ATOM	5857	CG2	THR	A	391	37.689	56.203	47.035	1.00	51.77	C
ATOM	5861	C	THR	A	391	36.102	52.893	48.239	1.00	45.74	C
ATOM	5862	O	THR	A	391	35.269	53.087	49.121	1.00	45.03	O
ATOM	5863	N	ASP	A	392	36.052	51.812	47.467	1.00	44.71	N
ATOM	5865	CA	ASP	A	392	35.129	50.743	47.833	1.00	42.13	C
ATOM	5867	CB	ASP	A	392	33.840	50.977	47.144	1.00	43.91	C
ATOM	5870	CG	ASP	A	392	33.994	51.000	45.722	1.00	45.23	C
ATOM	5871	OD1	ASP	A	392	35.000	50.496	45.229	1.00	45.27	O
ATOM	5872	OD2	ASP	A	392	33.161	51.519	45.017	1.00	46.76	O
ATOM	5873	C	ASP	A	392	35.663	49.385	47.506	1.00	40.51	C
ATOM	5874	O	ASP	A	392	36.837	49.268	47.180	1.00	42.21	O
ATOM	5875	N	LEU	A	393	34.839	48.351	47.691	1.00	39.13	N
ATOM	5877	CA	LEU	A	393	35.208	46.964	47.389	1.00	37.38	C
ATOM	5879	CB	LEU	A	393	34.402	45.992	48.238	1.00	35.46	C
ATOM	5882	CG	LEU	A	393	34.425	46.226	49.733	1.00	34.54	C
ATOM	5884	CD1	LEU	A	393	33.565	45.205	50.454	1.00	34.20	C
ATOM	5888	CD2	LEU	A	393	35.810	46.075	50.173	1.00	34.63	C
ATOM	5892	C	LEU	A	393	34.967	46.666	45.901	1.00	38.22	C
ATOM	5893	O	LEU	A	393	34.103	45.865	45.572	1.00	38.13	O
ATOM	5894	N	HIS	A	394	35.752	47.300	45.025	1.00	38.65	N
ATOM	5896	CA	HIS	A	394	35.460	47.287	43.607	1.00	40.24	C
ATOM	5898	CB	HIS	A	394	36.506	48.073	42.878	1.00	41.20	C
ATOM	5901	CG	HIS	A	394	37.873	47.539	43.061	1.00	43.28	C
ATOM	5902	ND1	HIS	A	394	38.577	47.684	44.242	1.00	44.16	N
ATOM	5904	CE1	HIS	A	394	39.754	47.091	44.108	1.00	44.04	C
ATOM	5906	NE2	HIS	A	394	39.820	46.535	42.906	1.00	44.28	N
ATOM	5908	CD2	HIS	A	394	38.649	46.787	42.240	1.00	44.56	C
ATOM	5910	C	HIS	A	394	35.397	45.864	43.053	1.00	39.79	C
ATOM	5911	O	HIS	A	394	34.658	45.565	42.118	1.00	39.77	O
ATOM	5912	N	ALA	A	395	36.186	44.971	43.639	1.00	38.62	N
ATOM	5914	CA	ALA	A	395	36.342	43.675	43.038	1.00	38.76	C
ATOM	5916	CB	ALA	A	395	37.493	43.036	43.581	1.00	37.86	C
ATOM	5920	C	ALA	A	395	35.102	42.811	43.228	1.00	38.35	C
ATOM	5921	O	ALA	A	395	34.964	41.819	42.513	1.00	39.40	O
ATOM	5922	N	PHE	A	396	34.194	43.239	44.111	1.00	36.67	N
ATOM	5924	CA	PHE	A	396	32.986	42.520	44.416	1.00	36.80	C
ATOM	5926	CB	PHE	A	396	32.934	42.244	45.922	1.00	35.11	C

ATOM	5929	CG	PHE	A	396	34.060	41.284	46.399	1.00	34.66	C
ATOM	5930	CD1	PHE	A	396	35.141	41.734	47.116	1.00	31.86	C
ATOM	5932	CE1	PHE	A	396	36.149	40.871	47.508	1.00	30.93	C
ATOM	5934	CZ	PHE	A	396	36.112	39.574	47.201	1.00	31.65	C
ATOM	5936	CE2	PHE	A	396	35.056	39.084	46.528	1.00	33.87	C
ATOM	5938	CD2	PHE	A	396	34.020	39.942	46.097	1.00	34.52	C
ATOM	5940	C	PHE	A	396	31.709	43.215	43.939	1.00	38.98	C
ATOM	5941	O	PHE	A	396	30.598	42.884	44.347	1.00	40.05	O
ATOM	5942	N	GLU	A	397	31.828	44.157	43.030	1.00	41.06	N
ATOM	5944	CA	GLU	A	397	30.664	44.849	42.495	1.00	43.09	C
ATOM	5946	CB	GLU	A	397	31.192	45.871	41.507	1.00	45.95	C
ATOM	5949	CG	GLU	A	397	31.738	45.211	40.255	1.00	49.91	C
ATOM	5952	CD	GLU	A	397	32.326	46.179	39.236	1.00	58.00	C
ATOM	5953	OE1	GLU	A	397	31.536	46.971	38.642	1.00	63.84	O
ATOM	5954	OE2	GLU	A	397	33.574	46.098	38.994	1.00	59.87	O
ATOM	5955	C	GLU	A	397	29.588	43.961	41.771	1.00	44.36	C
ATOM	5956	O	GLU	A	397	28.513	44.449	41.344	1.00	45.29	O
ATOM	5957	N	ASN	A	398	29.882	42.681	41.554	1.00	43.83	N
ATOM	5959	CA	ASN	A	398	28.902	41.797	40.905	1.00	44.75	C
ATOM	5961	CB	ASN	A	398	29.486	41.235	39.638	1.00	46.12	C
ATOM	5964	CG	ASN	A	398	29.691	42.290	38.613	1.00	46.75	C
ATOM	5965	OD1	ASN	A	398	28.812	43.035	38.309	1.00	50.16	O
ATOM	5966	ND2	ASN	A	398	30.866	42.371	38.097	1.00	47.71	N
ATOM	5969	C	ASN	A	398	28.408	40.673	41.794	1.00	43.09	C
ATOM	5970	O	ASN	A	398	27.632	39.847	41.387	1.00	44.84	O
ATOM	5971	N	LEU	A	399	28.830	40.707	43.033	1.00	40.07	N
ATOM	5973	CA	LEU	A	399	28.488	39.731	43.975	1.00	38.64	C
ATOM	5975	CB	LEU	A	399	29.387	39.940	45.179	1.00	35.59	C
ATOM	5978	CG	LEU	A	399	29.067	39.022	46.299	1.00	34.56	C
ATOM	5980	CD1	LEU	A	399	29.351	37.598	45.883	1.00	36.89	C
ATOM	5984	CD2	LEU	A	399	29.858	39.414	47.436	1.00	34.33	C
ATOM	5988	C	LEU	A	399	27.014	39.935	44.321	1.00	41.17	C
ATOM	5989	O	LEU	A	399	26.567	40.998	44.836	1.00	42.73	O
ATOM	5990	N	GLU	A	400	26.261	38.884	44.057	1.00	42.86	N
ATOM	5992	CA	GLU	A	400	24.817	38.875	44.151	1.00	44.43	C
ATOM	5994	CB	GLU	A	400	24.277	38.174	42.923	1.00	46.71	C
ATOM	5997	CG	GLU	A	400	24.484	39.044	41.719	1.00	50.19	C
ATOM	6000	CD	GLU	A	400	24.161	38.401	40.366	1.00	56.20	C
ATOM	6001	OE1	GLU	A	400	23.095	37.786	40.242	1.00	56.23	O
ATOM	6002	OE2	GLU	A	400	24.980	38.579	39.408	1.00	58.34	O
ATOM	6003	C	GLU	A	400	24.316	38.192	45.421	1.00	43.67	C
ATOM	6004	O	GLU	A	400	23.233	38.518	45.885	1.00	44.99	O
ATOM	6005	N	ILE	A	401	25.130	37.306	46.011	1.00	41.83	N
ATOM	6007	CA	ILE	A	401	24.737	36.490	47.162	1.00	40.84	C
ATOM	6009	CB	ILE	A	401	23.734	35.422	46.710	1.00	42.90	C
ATOM	6011	CG1	ILE	A	401	23.449	34.429	47.814	1.00	43.25	C
ATOM	6014	CD1	ILE	A	401	22.256	33.586	47.448	1.00	45.27	C
ATOM	6018	CG2	ILE	A	401	24.253	34.643	45.619	1.00	44.73	C
ATOM	6022	C	ILE	A	401	25.897	35.831	47.895	1.00	38.33	C
ATOM	6023	O	ILE	A	401	26.794	35.247	47.303	1.00	37.78	O
ATOM	6024	N	ILE	A	402	25.857	35.927	49.206	1.00	37.64	N
ATOM	6026	CA	ILE	A	402	26.758	35.219	50.099	1.00	35.89	C
ATOM	6028	CB	ILE	A	402	27.313	36.190	51.117	1.00	33.76	C
ATOM	6030	CG1	ILE	A	402	28.327	37.122	50.428	1.00	33.45	C
ATOM	6033	CD1	ILE	A	402	28.729	38.356	51.238	1.00	30.73	C
ATOM	6037	CG2	ILE	A	402	27.959	35.445	52.248	1.00	33.22	C
ATOM	6041	C	ILE	A	402	25.872	34.221	50.789	1.00	38.27	C
ATOM	6042	O	ILE	A	402	25.042	34.590	51.611	1.00	40.21	O
ATOM	6043	N	ARG	A	403	25.961	32.954	50.440	1.00	39.72	N
ATOM	6045	CA	ARG	A	403	25.029	31.971	51.036	1.00	41.41	C
ATOM	6047	CB	ARG	A	403	25.094	30.665	50.280	1.00	42.06	C
ATOM	6050	CG	ARG	A	403	24.566	30.759	48.913	1.00	42.50	C
ATOM	6053	CD	ARG	A	403	24.271	29.361	48.306	1.00	45.57	C
ATOM	6056	NE	ARG	A	403	23.861	29.447	46.910	1.00	46.93	N
ATOM	6058	CZ	ARG	A	403	22.741	30.008	46.512	1.00	49.93	C
ATOM	6059	NH1	ARG	A	403	21.876	30.503	47.387	1.00	52.29	N
ATOM	6062	NH2	ARG	A	403	22.461	30.068	45.235	1.00	52.68	N
ATOM	6065	C	ARG	A	403	25.272	31.712	52.541	1.00	40.44	C

ATOM 6066	O	ARG	A	403	24.332	31.432	53.262	1.00	41.87	O
ATOM 6067	N	GLY	A	404	26.520	31.772	52.979	1.00	38.47	N
ATOM 6069	CA	GLY	A	404	26.841	31.694	54.394	1.00	38.72	C
ATOM 6072	C	GLY	A	404	26.779	30.296	55.021	1.00	40.86	C
ATOM 6073	O	GLY	A	404	26.528	30.097	56.219	1.00	42.25	O
ATOM 6074	N	ARG	A	405	26.982	29.284	54.204	1.00	41.64	N
ATOM 6076	CA	ARG	A	405	26.955	27.903	54.687	1.00	43.01	C
ATOM 6078	CB	ARG	A	405	27.068	27.061	53.455	1.00	44.80	C
ATOM 6081	CG	ARG	A	405	25.790	26.999	52.727	1.00	46.83	C
ATOM 6084	CD	ARG	A	405	25.923	26.159	51.460	1.00	49.83	C
ATOM 6087	NE	ARG	A	405	24.656	26.202	50.690	1.00	54.46	N
ATOM 6089	CZ	ARG	A	405	24.534	25.597	49.539	1.00	55.52	C
ATOM 6090	NH1	ARG	A	405	25.589	24.930	49.073	1.00	55.71	N
ATOM 6093	NH2	ARG	A	405	23.379	25.608	48.890	1.00	59.28	N
ATOM 6096	C	ARG	A	405	28.043	27.497	55.659	1.00	40.66	C
ATOM 6097	O	ARG	A	405	27.881	26.744	56.531	1.00	41.11	O
ATOM 6098	N	THR	A	406	29.194	27.962	55.351	1.00	40.05	N
ATOM 6100	CA	THR	A	406	30.381	28.035	56.186	1.00	40.02	C
ATOM 6102	CB	THR	A	406	31.557	27.731	55.244	1.00	39.43	C
ATOM 6104	OG1	THR	A	406	31.310	26.463	54.715	1.00	43.84	O
ATOM 6106	CG2	THR	A	406	32.910	27.424	55.938	1.00	43.39	C
ATOM 6110	C	THR	A	406	30.393	29.475	56.679	1.00	37.35	C
ATOM 6111	O	THR	A	406	29.970	30.388	55.965	1.00	36.01	O
ATOM 6112	N	LYS	A	407	30.744	29.669	57.936	1.00	38.03	N
ATOM 6114	CA	LYS	A	407	30.913	31.032	58.480	1.00	37.24	C
ATOM 6116	CB	LYS	A	407	29.808	31.396	59.427	1.00	38.61	C
ATOM 6119	CG	LYS	A	407	28.408	31.305	58.843	1.00	39.27	C
ATOM 6122	CD	LYS	A	407	27.467	30.706	59.864	1.00	41.05	C
ATOM 6125	CE	LYS	A	407	26.150	30.400	59.316	1.00	44.32	C
ATOM 6128	NZ	LYS	A	407	25.229	31.288	60.019	1.00	52.24	N
ATOM 6132	C	LYS	A	407	32.218	31.114	59.237	1.00	37.24	C
ATOM 6133	O	LYS	A	407	32.849	30.135	59.489	1.00	40.60	O
ATOM 6134	N	GLN	A	408	32.674	32.299	59.552	1.00	36.38	N
ATOM 6136	CA	GLN	A	408	33.979	32.465	60.158	1.00	34.55	C
ATOM 6138	CB	GLN	A	408	34.581	33.801	59.825	1.00	32.09	C
ATOM 6141	CG	GLN	A	408	35.948	33.899	60.498	1.00	31.64	C
ATOM 6144	CD	GLN	A	408	36.473	35.248	60.620	1.00	30.23	C
ATOM 6145	OE1	GLN	A	408	35.772	36.221	60.467	1.00	39.71	O
ATOM 6146	NE2	GLN	A	408	37.680	35.336	60.852	1.00	26.16	N
ATOM 6149	C	GLN	A	408	33.734	32.402	61.666	1.00	35.59	C
ATOM 6150	O	GLN	A	408	32.869	33.106	62.167	1.00	34.95	O
ATOM 6151	N	HIS	A	409	34.501	31.551	62.338	1.00	35.68	N
ATOM 6153	CA	HIS	A	409	34.305	31.239	63.709	1.00	36.96	C
ATOM 6155	CB	HIS	A	409	34.594	32.495	64.525	1.00	36.30	C
ATOM 6158	CG	HIS	A	409	35.974	32.999	64.388	1.00	32.03	C
ATOM 6159	ND1	HIS	A	409	37.046	32.335	64.885	1.00	36.03	N
ATOM 6161	CE1	HIS	A	409	38.149	32.995	64.602	1.00	32.96	C
ATOM 6163	NE2	HIS	A	409	37.823	34.099	63.993	1.00	29.44	N
ATOM 6165	CD2	HIS	A	409	36.464	34.108	63.819	1.00	33.90	C
ATOM 6167	C	HIS	A	409	32.898	30.688	63.922	1.00	38.45	C
ATOM 6168	O	HIS	A	409	32.282	30.785	64.967	1.00	39.82	O
ATOM 6169	N	GLY	A	410	32.341	30.135	62.879	1.00	39.18	N
ATOM 6171	CA	GLY	A	410	30.948	29.727	62.974	1.00	40.64	C
ATOM 6174	C	GLY	A	410	30.003	30.872	63.123	1.00	39.89	C
ATOM 6175	O	GLY	A	410	28.908	30.596	63.288	1.00	40.91	O
ATOM 6176	N	ASN	A	411	30.443	32.129	63.096	1.00	39.05	N
ATOM 6178	CA	ASN	A	411	29.582	33.303	63.276	1.00	39.30	C
ATOM 6180	CB	ASN	A	411	30.176	34.429	64.213	1.00	39.22	C
ATOM 6183	CG	ASN	A	411	30.202	34.049	65.693	1.00	44.51	C
ATOM 6184	OD1	ASN	A	411	29.929	32.909	65.994	1.00	52.63	O
ATOM 6185	ND2	ASN	A	411	30.548	34.986	66.614	1.00	41.99	N
ATOM 6188	C	ASN	A	411	29.312	33.940	61.907	1.00	37.22	C
ATOM 6189	O	ASN	A	411	28.194	33.948	61.435	1.00	37.23	O
ATOM 6190	N	PHE	A	412	30.342	34.474	61.278	1.00	34.68	N
ATOM 6192	CA	PHE	A	412	30.135	35.478	60.287	1.00	33.77	C
ATOM 6194	CB	PHE	A	412	31.294	36.438	60.393	1.00	32.92	C
ATOM 6197	CG	PHE	A	412	31.440	37.028	61.750	1.00	33.90	C
ATOM 6198	CD1	PHE	A	412	32.607	36.831	62.507	1.00	34.35	C

ATOM 6200	CE1	PHE	A	412	32.708	37.353	63.793	1.00	31.85	C
ATOM 6202	CZ	PHE	A	412	31.688	38.084	64.275	1.00	33.72	C
ATOM 6204	CE2	PHE	A	412	30.575	38.290	63.552	1.00	33.28	C
ATOM 6206	CD2	PHE	A	412	30.419	37.748	62.306	1.00	32.58	C
ATOM 6208	C	PHE	A	412	30.053	34.983	58.856	1.00	33.95	C
ATOM 6209	O	PHE	A	412	30.865	34.164	58.410	1.00	34.69	O
ATOM 6210	N	SER	A	413	29.101	35.512	58.088	1.00	34.35	N
ATOM 6212	CA	SER	A	413	29.154	35.319	56.617	1.00	33.33	C
ATOM 6214	CB	SER	A	413	27.803	34.919	56.082	1.00	34.29	C
ATOM 6217	OG	SER	A	413	26.927	35.986	56.195	1.00	34.47	O
ATOM 6219	C	SER	A	413	29.711	36.474	55.800	1.00	31.62	C
ATOM 6220	O	SER	A	413	29.980	36.268	54.679	1.00	30.19	O
ATOM 6221	N	LEU	A	414	29.810	37.698	56.361	1.00	32.41	N
ATOM 6223	CA	LEU	A	414	30.474	38.882	55.716	1.00	31.11	C
ATOM 6225	CB	LEU	A	414	29.458	39.830	55.119	1.00	32.13	C
ATOM 6228	CG	LEU	A	414	29.895	41.226	54.590	1.00	33.57	C
ATOM 6230	CD1	LEU	A	414	31.044	41.176	53.529	1.00	33.54	C
ATOM 6234	CD2	LEU	A	414	28.737	41.998	53.991	1.00	34.32	C
ATOM 6238	C	LEU	A	414	31.241	39.660	56.755	1.00	30.16	C
ATOM 6239	O	LEU	A	414	30.616	40.240	57.603	1.00	31.21	O
ATOM 6240	N	ALA	A	415	32.565	39.668	56.721	1.00	28.59	N
ATOM 6242	CA	ALA	A	415	33.347	40.421	57.709	1.00	28.16	C
ATOM 6244	CB	ALA	A	415	34.171	39.540	58.506	1.00	27.51	C
ATOM 6248	C	ALA	A	415	34.233	41.399	56.975	1.00	28.12	C
ATOM 6249	O	ALA	A	415	34.998	41.005	56.099	1.00	28.60	O
ATOM 6250	N	VAL	A	416	34.077	42.689	57.294	1.00	28.48	N
ATOM 6252	CA	VAL	A	416	34.865	43.768	56.701	1.00	27.99	C
ATOM 6254	CB	VAL	A	416	33.940	44.600	55.867	1.00	28.89	C
ATOM 6256	CG1	VAL	A	416	34.667	45.745	55.232	1.00	29.37	C
ATOM 6260	CG2	VAL	A	416	33.294	43.709	54.828	1.00	29.55	C
ATOM 6264	C	VAL	A	416	35.492	44.588	57.822	1.00	27.40	C
ATOM 6265	O	VAL	A	416	34.788	45.252	58.514	1.00	28.63	O
ATOM 6266	N	VAL	A	417	36.805	44.579	57.982	1.00	26.45	N
ATOM 6268	CA	VAL	A	417	37.390	45.086	59.181	1.00	27.04	C
ATOM 6270	CB	VAL	A	417	37.707	43.940	60.175	1.00	27.03	C
ATOM 6272	CG1	VAL	A	417	38.177	44.508	61.435	1.00	31.02	C
ATOM 6276	CG2	VAL	A	417	36.616	43.085	60.494	1.00	25.94	C
ATOM 6280	C	VAL	A	417	38.700	45.849	58.959	1.00	27.79	C
ATOM 6281	O	VAL	A	417	39.729	45.304	58.592	1.00	28.44	O
ATOM 6282	N	SER	A	418	38.659	47.118	59.304	1.00	29.69	N
ATOM 6284	CA	SER	A	418	39.783	48.037	59.273	1.00	29.96	C
ATOM 6286	CB	SER	A	418	40.834	47.559	60.216	1.00	30.43	C
ATOM 6289	OG	SER	A	418	41.770	48.555	60.517	1.00	34.34	O
ATOM 6291	C	SER	A	418	40.320	48.213	57.889	1.00	30.06	C
ATOM 6292	O	SER	A	418	41.441	48.007	57.668	1.00	30.27	O
ATOM 6293	N	LEU	A	419	39.473	48.581	56.934	1.00	30.95	N
ATOM 6295	CA	LEU	A	419	39.881	49.016	55.578	1.00	30.62	C
ATOM 6297	CB	LEU	A	419	38.974	48.380	54.560	1.00	29.76	C
ATOM 6300	CG	LEU	A	419	38.564	46.915	54.692	1.00	27.89	C
ATOM 6302	CD1	LEU	A	419	37.844	46.349	53.455	1.00	26.37	C
ATOM 6306	CD2	LEU	A	419	39.796	46.136	54.942	1.00	30.27	C
ATOM 6310	C	LEU	A	419	39.787	50.520	55.513	1.00	31.84	C
ATOM 6311	O	LEU	A	419	39.248	51.129	56.415	1.00	34.04	O
ATOM 6312	N	ASN	A	420	40.347	51.141	54.505	1.00	32.95	N
ATOM 6314	CA	ASN	A	420	40.409	52.602	54.421	1.00	35.62	C
ATOM 6316	CB	ASN	A	420	41.682	53.008	53.739	1.00	37.74	C
ATOM 6319	CG	ASN	A	420	41.961	54.452	53.815	1.00	40.33	C
ATOM 6320	OD1	ASN	A	420	41.713	55.072	54.796	1.00	41.29	O
ATOM 6321	ND2	ASN	A	420	42.543	54.991	52.774	1.00	42.87	N
ATOM 6324	C	ASN	A	420	39.322	53.016	53.519	1.00	38.01	C
ATOM 6325	O	ASN	A	420	39.319	54.112	53.010	1.00	41.16	O
ATOM 6326	N	ILE	A	421	38.383	52.103	53.301	1.00	37.63	N
ATOM 6328	CA	ILE	A	421	37.280	52.252	52.393	1.00	38.22	C
ATOM 6330	CB	ILE	A	421	36.767	50.873	52.179	1.00	36.26	C
ATOM 6332	CG1	ILE	A	421	36.784	50.662	50.724	1.00	40.93	C
ATOM 6335	CD1	ILE	A	421	36.644	49.237	50.423	1.00	45.47	C
ATOM 6339	CG2	ILE	A	421	35.404	50.467	52.732	1.00	34.04	C
ATOM 6343	C	ILE	A	421	36.263	53.290	52.797	1.00	40.58	C

ATOM 6344	O	ILE	A	421	36.203	53.706	53.954	1.00	42.88	O
ATOM 6345	N	THR	A	422	35.511	53.755	51.814	1.00	42.92	N
ATOM 6347	CA	THR	A	422	34.541	54.868	51.949	1.00	44.98	C
ATOM 6349	CB	THR	A	422	34.870	55.912	50.914	1.00	47.73	C
ATOM 6351	OG1	THR	A	422	36.200	56.430	51.181	1.00	49.14	O
ATOM 6353	CG2	THR	A	422	33.950	57.054	51.018	1.00	49.95	C
ATOM 6357	C	THR	A	422	33.106	54.418	51.763	1.00	44.41	C
ATOM 6358	O	THR	A	422	32.230	54.898	52.433	1.00	46.45	O
ATOM 6359	N	SER	A	423	32.878	53.462	50.889	1.00	42.64	N
ATOM 6361	CA	SER	A	423	31.626	52.762	50.831	1.00	41.79	C
ATOM 6363	CB	SER	A	423	30.874	53.300	49.666	1.00	44.68	C
ATOM 6366	OG	SER	A	423	31.655	53.146	48.490	1.00	46.25	O
ATOM 6368	C	SER	A	423	31.838	51.294	50.560	1.00	38.94	C
ATOM 6369	O	SER	A	423	32.862	50.907	50.044	1.00	37.59	O
ATOM 6370	N	LEU	A	424	30.846	50.468	50.858	1.00	38.17	N
ATOM 6372	CA	LEU	A	424	31.038	49.034	50.632	1.00	36.68	C
ATOM 6374	CB	LEU	A	424	29.949	48.233	51.394	1.00	35.68	C
ATOM 6377	CG	LEU	A	424	30.177	48.127	52.916	1.00	36.14	C
ATOM 6379	CD1	LEU	A	424	28.913	47.658	53.776	1.00	34.01	C
ATOM 6383	CD2	LEU	A	424	31.441	47.302	53.250	1.00	33.86	C
ATOM 6387	C	LEU	A	424	31.090	48.724	49.078	1.00	36.95	C
ATOM 6388	O	LEU	A	424	31.909	48.010	48.555	1.00	33.92	O
ATOM 6389	N	GLY	A	425	30.182	49.314	48.364	1.00	38.75	N
ATOM 6391	CA	GLY	A	425	30.155	49.084	46.969	1.00	40.99	C
ATOM 6394	C	GLY	A	425	29.443	47.814	46.622	1.00	41.20	C
ATOM 6395	O	GLY	A	425	29.472	47.443	45.460	1.00	44.17	O
ATOM 6396	N	LEU	A	426	28.805	47.141	47.566	1.00	40.36	N
ATOM 6398	CA	LEU	A	426	28.240	45.842	47.258	1.00	39.92	C
ATOM 6400	CB	LEU	A	426	28.082	45.026	48.527	1.00	37.76	C
ATOM 6403	CG	LEU	A	426	29.426	44.744	49.170	1.00	36.86	C
ATOM 6405	CD1	LEU	A	426	29.176	43.892	50.403	1.00	38.68	C
ATOM 6409	CD2	LEU	A	426	30.381	44.023	48.252	1.00	35.23	C
ATOM 6413	C	LEU	A	426	26.932	46.001	46.557	1.00	42.18	C
ATOM 6414	O	LEU	A	426	25.894	45.526	47.046	1.00	44.29	O
ATOM 6415	N	ARG	A	427	26.948	46.648	45.405	1.00	43.67	N
ATOM 6417	CA	ARG	A	427	25.710	47.033	44.753	1.00	46.27	C
ATOM 6419	CB	ARG	A	427	25.952	48.098	43.700	1.00	48.95	C
ATOM 6422	CG	ARG	A	427	26.781	47.687	42.500	1.00	51.08	C
ATOM 6425	CD	ARG	A	427	26.942	48.830	41.462	1.00	53.68	C
ATOM 6428	NE	ARG	A	427	27.600	49.930	42.126	1.00	52.90	N
ATOM 6430	CZ	ARG	A	427	28.907	49.974	42.333	1.00	54.16	C
ATOM 6431	NH1	ARG	A	427	29.687	49.026	41.855	1.00	56.67	N
ATOM 6434	NH2	ARG	A	427	29.469	50.978	42.973	1.00	53.42	N
ATOM 6437	C	ARG	A	427	24.921	45.923	44.137	1.00	46.88	C
ATOM 6438	O	ARG	A	427	23.864	46.167	43.683	1.00	49.33	O
ATOM 6439	N	SER	A	428	25.423	44.709	44.079	1.00	45.62	N
ATOM 6441	CA	SER	A	428	24.656	43.644	43.465	1.00	46.68	C
ATOM 6443	CB	SER	A	428	25.514	42.826	42.506	1.00	45.99	C
ATOM 6446	OG	SER	A	428	25.834	43.593	41.362	1.00	47.96	O
ATOM 6448	C	SER	A	428	24.148	42.720	44.486	1.00	45.95	C
ATOM 6449	O	SER	A	428	23.366	41.806	44.178	1.00	48.53	O
ATOM 6450	N	LEU	A	429	24.620	42.903	45.703	1.00	44.50	N
ATOM 6452	CA	LEU	A	429	24.329	41.963	46.753	1.00	43.25	C
ATOM 6454	CB	LEU	A	429	25.197	42.215	47.923	1.00	40.85	C
ATOM 6457	CG	LEU	A	429	25.039	41.129	48.966	1.00	40.60	C
ATOM 6459	CD1	LEU	A	429	25.400	39.734	48.410	1.00	40.92	C
ATOM 6463	CD2	LEU	A	429	25.895	41.522	50.121	1.00	38.94	C
ATOM 6467	C	LEU	A	429	22.889	42.116	47.185	1.00	45.57	C
ATOM 6468	O	LEU	A	429	22.516	43.074	47.852	1.00	46.09	O
ATOM 6469	N	LYS	A	430	22.079	41.148	46.801	1.00	46.89	N
ATOM 6471	CA	LYS	A	430	20.729	41.149	47.203	1.00	49.09	C
ATOM 6473	CB	LYS	A	430	19.848	40.867	46.020	1.00	52.17	C
ATOM 6476	CG	LYS	A	430	20.075	41.767	44.775	1.00	56.42	C
ATOM 6479	CD	LYS	A	430	20.040	43.323	45.059	1.00	58.97	C
ATOM 6482	CE	LYS	A	430	19.311	44.138	43.898	1.00	64.18	C
ATOM 6485	NZ	LYS	A	430	18.517	45.353	44.422	1.00	67.30	N
ATOM 6489	C	LYS	A	430	20.482	40.120	48.287	1.00	48.70	C
ATOM 6490	O	LYS	A	430	19.396	40.095	48.817	1.00	52.84	O

ATOM 6491	N	GLU	A	431	21.402	39.237	48.636	1.00	45.66	N
ATOM 6493	CA	GLU	A	431	20.996	38.242	49.591	1.00	44.87	C
ATOM 6495	CB	GLU	A	431	20.319	37.086	48.889	1.00	46.51	C
ATOM 6498	CG	GLU	A	431	20.122	35.923	49.821	1.00	47.21	C
ATOM 6501	CD	GLU	A	431	19.206	34.813	49.314	1.00	54.73	C
ATOM 6502	OE1	GLU	A	431	18.587	34.845	48.198	1.00	57.66	O
ATOM 6503	OE2	GLU	A	431	19.061	33.865	50.108	1.00	58.94	O
ATOM 6504	C	GLU	A	431	22.172	37.745	50.312	1.00	42.74	C
ATOM 6505	O	GLU	A	431	23.201	37.454	49.714	1.00	40.52	O
ATOM 6506	N	ILE	A	432	22.020	37.676	51.635	1.00	43.15	N
ATOM 6508	CA	ILE	A	432	22.953	36.946	52.541	1.00	40.67	C
ATOM 6510	CB	ILE	A	432	23.656	37.901	53.551	1.00	38.41	C
ATOM 6512	CG1	ILE	A	432	24.459	38.988	52.813	1.00	36.41	C
ATOM 6515	CD1	ILE	A	432	24.835	40.134	53.667	1.00	34.20	C
ATOM 6519	CG2	ILE	A	432	24.583	37.096	54.405	1.00	37.20	C
ATOM 6523	C	ILE	A	432	22.159	35.884	53.298	1.00	42.12	C
ATOM 6524	O	ILE	A	432	21.589	36.182	54.330	1.00	43.01	O
ATOM 6525	N	SER	A	433	22.116	34.665	52.767	1.00	43.12	N
ATOM 6527	CA	SER	A	433	21.267	33.580	53.285	1.00	45.85	C
ATOM 6529	CB	SER	A	433	21.474	32.275	52.493	1.00	46.97	C
ATOM 6532	OG	SER	A	433	21.513	32.412	51.072	1.00	47.67	O
ATOM 6534	C	SER	A	433	21.414	33.251	54.795	1.00	45.97	C
ATOM 6535	O	SER	A	433	20.426	33.093	55.543	1.00	49.16	O
ATOM 6536	N	ASP	A	434	22.636	33.142	55.246	1.00	43.68	N
ATOM 6538	CA	ASP	A	434	22.897	32.829	56.616	1.00	44.35	C
ATOM 6540	CB	ASP	A	434	23.092	31.311	56.710	1.00	46.18	C
ATOM 6543	CG	ASP	A	434	22.775	30.720	58.098	1.00	49.52	C
ATOM 6544	OD1	ASP	A	434	22.139	31.350	58.999	1.00	50.92	O
ATOM 6545	OD2	ASP	A	434	23.167	29.561	58.374	1.00	53.17	O
ATOM 6546	C	ASP	A	434	24.121	33.598	57.103	1.00	41.73	C
ATOM 6547	O	ASP	A	434	24.857	34.175	56.338	1.00	39.17	O
ATOM 6548	N	GLY	A	435	24.301	33.626	58.413	1.00	43.10	N
ATOM 6550	CA	GLY	A	435	25.468	34.230	59.044	1.00	41.52	C
ATOM 6553	C	GLY	A	435	25.300	35.685	59.493	1.00	40.59	C
ATOM 6554	O	GLY	A	435	24.326	36.283	59.093	1.00	42.87	O
ATOM 6555	N	ASP	A	436	26.244	36.248	60.256	1.00	38.15	N
ATOM 6557	CA	ASP	A	436	26.162	37.608	60.633	1.00	37.69	C
ATOM 6559	CB	ASP	A	436	26.451	37.759	62.063	1.00	38.84	C
ATOM 6562	CG	ASP	A	436	25.542	36.897	62.949	1.00	45.93	C
ATOM 6563	OD1	ASP	A	436	24.475	36.346	62.465	1.00	50.44	O
ATOM 6564	OD2	ASP	A	436	25.849	36.744	64.188	1.00	48.71	O
ATOM 6565	C	ASP	A	436	27.101	38.463	59.884	1.00	35.36	C
ATOM 6566	O	ASP	A	436	28.171	38.045	59.505	1.00	34.46	O
ATOM 6567	N	VAL	A	437	26.675	39.699	59.666	1.00	34.91	N
ATOM 6569	CA	VAL	A	437	27.539	40.698	59.138	1.00	32.89	C
ATOM 6571	CB	VAL	A	437	26.807	41.670	58.331	1.00	33.15	C
ATOM 6573	CG1	VAL	A	437	27.752	42.703	57.809	1.00	33.08	C
ATOM 6577	CG2	VAL	A	437	26.255	40.973	57.202	1.00	34.45	C
ATOM 6581	C	VAL	A	437	28.177	41.428	60.248	1.00	32.40	C
ATOM 6582	O	VAL	A	437	27.550	41.789	61.196	1.00	33.85	O
ATOM 6583	N	ILE	A	438	29.465	41.596	60.128	1.00	31.56	N
ATOM 6585	CA	ILE	A	438	30.196	42.496	60.980	1.00	32.05	C
ATOM 6587	CB	ILE	A	438	31.067	41.725	62.017	1.00	31.78	C
ATOM 6589	CG1	ILE	A	438	31.917	42.722	62.782	1.00	33.81	C
ATOM 6592	CD1	ILE	A	438	31.980	42.501	64.214	1.00	34.56	C
ATOM 6596	CG2	ILE	A	438	31.869	40.711	61.404	1.00	28.81	C
ATOM 6600	C	ILE	A	438	31.049	43.403	60.138	1.00	30.73	C
ATOM 6601	O	ILE	A	438	31.771	42.980	59.286	1.00	30.46	O
ATOM 6602	N	ILE	A	439	30.969	44.668	60.434	1.00	31.67	N
ATOM 6604	CA	ILE	A	439	31.661	45.697	59.693	1.00	31.64	C
ATOM 6606	CB	ILE	A	439	30.627	46.403	58.860	1.00	33.32	C
ATOM 6608	CG1	ILE	A	439	30.097	45.368	57.903	1.00	33.68	C
ATOM 6611	CD1	ILE	A	439	29.445	45.900	56.843	1.00	37.03	C
ATOM 6615	CG2	ILE	A	439	31.173	47.672	58.251	1.00	32.18	C
ATOM 6619	C	ILE	A	439	32.188	46.642	60.672	1.00	32.06	C
ATOM 6620	O	ILE	A	439	31.404	47.452	61.174	1.00	33.52	O
ATOM 6621	N	SER	A	440	33.472	46.512	60.990	1.00	31.48	N
ATOM 6623	CA	SER	A	440	34.064	47.352	61.993	1.00	32.75	C

ATOM	6625	CB	SER	A	440	34.033	46.654	63.346	1.00	34.08	C
ATOM	6628	OG	SER	A	440	35.219	46.099	63.813	1.00	30.62	O
ATOM	6630	C	SER	A	440	35.423	47.965	61.710	1.00	33.20	C
ATOM	6631	O	SER	A	440	36.301	47.431	61.050	1.00	31.65	O
ATOM	6632	N	GLY	A	441	35.564	49.154	62.243	1.00	34.51	N
ATOM	6634	CA	GLY	A	441	36.833	49.803	62.243	1.00	35.00	C
ATOM	6637	C	GLY	A	441	37.257	50.356	60.936	1.00	34.41	C
ATOM	6638	O	GLY	A	441	38.416	50.475	60.699	1.00	36.85	O
ATOM	6639	N	ASN	A	442	36.327	50.764	60.121	1.00	34.47	N
ATOM	6641	CA	ASN	A	442	36.633	51.433	58.902	1.00	34.18	C
ATOM	6643	CB	ASN	A	442	35.722	50.813	57.889	1.00	32.80	C
ATOM	6646	CG	ASN	A	442	35.795	49.277	57.918	1.00	31.45	C
ATOM	6647	OD1	ASN	A	442	36.767	48.706	57.513	1.00	31.51	O
ATOM	6648	ND2	ASN	A	442	34.759	48.620	58.385	1.00	33.37	N
ATOM	6651	C	ASN	A	442	36.483	52.975	59.097	1.00	36.49	C
ATOM	6652	O	ASN	A	442	35.399	53.472	58.871	1.00	37.28	O
ATOM	6653	N	LYS	A	443	37.537	53.694	59.570	1.00	37.27	N
ATOM	6655	CA	LYS	A	443	37.443	55.111	59.920	1.00	40.56	C
ATOM	6657	CB	LYS	A	443	38.759	55.895	59.850	1.00	42.83	C
ATOM	6660	CG	LYS	A	443	39.988	55.442	60.495	1.00	45.94	C
ATOM	6663	CD	LYS	A	443	41.237	56.329	60.166	1.00	47.16	C
ATOM	6666	CE	LYS	A	443	42.546	55.495	60.405	1.00	49.15	C
ATOM	6669	NZ	LYS	A	443	43.707	55.709	59.389	1.00	50.56	N
ATOM	6673	C	LYS	A	443	36.582	55.947	58.945	1.00	42.61	C
ATOM	6674	O	LYS	A	443	35.994	56.946	59.344	1.00	44.63	O
ATOM	6675	N	ASN	A	444	36.652	55.608	57.658	1.00	42.59	N
ATOM	6677	CA	ASN	A	444	36.171	56.418	56.545	1.00	44.01	C
ATOM	6679	CB	ASN	A	444	37.294	56.464	55.497	1.00	44.13	C
ATOM	6682	CG	ASN	A	444	38.405	57.361	55.910	1.00	46.10	C
ATOM	6683	OD1	ASN	A	444	38.183	58.301	56.639	1.00	50.68	O
ATOM	6684	ND2	ASN	A	444	39.594	57.100	55.461	1.00	47.38	N
ATOM	6687	C	ASN	A	444	34.921	55.847	55.902	1.00	43.68	C
ATOM	6688	O	ASN	A	444	34.542	56.270	54.825	1.00	45.84	O
ATOM	6689	N	LEU	A	445	34.283	54.866	56.539	1.00	42.24	N
ATOM	6691	CA	LEU	A	445	33.301	54.082	55.849	1.00	41.55	C
ATOM	6693	CB	LEU	A	445	33.208	52.701	56.401	1.00	38.97	C
ATOM	6696	CG	LEU	A	445	32.117	51.924	55.680	1.00	39.43	C
ATOM	6698	CD1	LEU	A	445	32.454	51.904	54.221	1.00	41.08	C
ATOM	6702	CD2	LEU	A	445	31.954	50.485	56.169	1.00	37.35	C
ATOM	6706	C	LEU	A	445	31.995	54.746	56.056	1.00	44.65	C
ATOM	6707	O	LEU	A	445	31.635	55.160	57.193	1.00	46.34	O
ATOM	6708	N	CYS	A	446	31.267	54.879	54.966	1.00	45.65	N
ATOM	6710	CA	CYS	A	446	29.956	55.494	55.049	1.00	47.96	C
ATOM	6712	CB	CYS	A	446	29.980	56.842	54.346	1.00	51.65	C
ATOM	6715	SG	CYS	A	446	30.690	58.223	55.323	1.00	56.94	S
ATOM	6716	C	CYS	A	446	28.930	54.580	54.454	1.00	45.78	C
ATOM	6717	O	CYS	A	446	29.247	53.516	53.948	1.00	45.34	O
ATOM	6718	N	TYR	A	447	27.698	54.972	54.622	1.00	46.60	N
ATOM	6720	CA	TYR	A	447	26.536	54.438	53.926	1.00	46.93	C
ATOM	6722	CB	TYR	A	447	26.727	54.312	52.366	1.00	46.78	C
ATOM	6725	CG	TYR	A	447	27.370	55.536	51.702	1.00	48.48	C
ATOM	6726	CD1	TYR	A	447	28.763	55.661	51.604	1.00	48.29	C
ATOM	6728	CE1	TYR	A	447	29.359	56.796	51.020	1.00	49.65	C
ATOM	6730	CZ	TYR	A	447	28.561	57.823	50.584	1.00	53.33	C
ATOM	6731	OH	TYR	A	447	29.156	58.934	50.022	1.00	56.47	O
ATOM	6733	CE2	TYR	A	447	27.188	57.718	50.684	1.00	52.55	C
ATOM	6735	CD2	TYR	A	447	26.603	56.594	51.237	1.00	50.12	C
ATOM	6737	C	TYR	A	447	26.006	53.182	54.579	1.00	45.12	C
ATOM	6738	O	TYR	A	447	24.828	52.906	54.450	1.00	46.05	O
ATOM	6739	N	ALA	A	448	26.825	52.441	55.307	1.00	42.46	N
ATOM	6741	CA	ALA	A	448	26.412	51.097	55.672	1.00	42.12	C
ATOM	6743	CB	ALA	A	448	27.486	50.466	56.386	1.00	40.08	C
ATOM	6747	C	ALA	A	448	25.164	51.065	56.550	1.00	45.51	C
ATOM	6748	O	ALA	A	448	24.377	50.118	56.546	1.00	46.84	O
ATOM	6749	N	ASN	A	449	25.042	52.116	57.349	1.00	48.30	N
ATOM	6751	CA	ASN	A	449	24.032	52.298	58.385	1.00	50.40	C
ATOM	6753	CB	ASN	A	449	24.550	53.507	59.267	1.00	51.87	C
ATOM	6756	CG	ASN	A	449	24.734	54.895	58.395	1.00	57.64	C

ATOM 6757	OD1	ASN	A	449	25.688	55.006	57.531	1.00	53.24	O
ATOM 6758	ND2	ASN	A	449	23.747	55.920	58.585	1.00	59.18	N
ATOM 6761	C	ASN	A	449	22.672	52.509	57.647	1.00	52.26	C
ATOM 6762	O	ASN	A	449	21.637	52.128	58.077	1.00	53.29	O
ATOM 6763	N	THR	A	450	22.728	53.091	56.469	1.00	53.13	N
ATOM 6765	CA	THR	A	450	21.597	53.268	55.534	1.00	54.99	C
ATOM 6767	CB	THR	A	450	22.266	53.742	54.252	1.00	54.62	C
ATOM 6769	OG1	THR	A	450	22.367	55.152	54.295	1.00	55.61	O
ATOM 6771	CG2	THR	A	450	21.443	53.564	53.124	1.00	57.50	C
ATOM 6775	C	THR	A	450	20.713	52.104	55.065	1.00	55.13	C
ATOM 6776	O	THR	A	450	19.534	52.252	54.725	1.00	57.64	O
ATOM 6777	N	ILE	A	451	21.340	50.971	54.847	1.00	53.09	N
ATOM 6779	CA	ILE	A	451	20.639	49.838	54.231	1.00	52.81	C
ATOM 6781	CB	ILE	A	451	21.672	48.959	53.650	1.00	48.99	C
ATOM 6783	CG1	ILE	A	451	21.964	49.458	52.272	1.00	48.98	C
ATOM 6786	CD1	ILE	A	451	23.287	48.919	51.907	1.00	51.48	C
ATOM 6790	CG2	ILE	A	451	21.238	47.512	53.660	1.00	48.80	C
ATOM 6794	C	ILE	A	451	19.855	49.041	55.251	1.00	53.28	C
ATOM 6795	O	ILE	A	451	20.291	48.882	56.403	1.00	53.75	O
ATOM 6796	N	ASN	A	452	18.729	48.501	54.859	1.00	54.61	N
ATOM 6798	CA	ASN	A	452	18.075	47.564	55.753	1.00	54.85	C
ATOM 6800	CB	ASN	A	452	16.582	47.583	55.595	1.00	58.78	C
ATOM 6803	CG	ASN	A	452	15.898	46.688	56.573	1.00	60.06	C
ATOM 6804	OD1	ASN	A	452	16.477	46.247	57.535	1.00	60.16	O
ATOM 6805	ND2	ASN	A	452	14.630	46.447	56.348	1.00	66.13	N
ATOM 6808	C	ASN	A	452	18.584	46.161	55.514	1.00	51.88	C
ATOM 6809	O	ASN	A	452	18.079	45.429	54.688	1.00	51.93	O
ATOM 6810	N	TRP	A	453	19.574	45.788	56.289	1.00	49.02	N
ATOM 6812	CA	TRP	A	453	20.200	44.509	56.111	1.00	47.00	C
ATOM 6814	CB	TRP	A	453	21.380	44.370	57.080	1.00	43.94	C
ATOM 6817	CG	TRP	A	453	22.510	45.291	56.788	1.00	42.79	C
ATOM 6818	CD1	TRP	A	453	22.646	46.594	57.203	1.00	43.19	C
ATOM 6820	NE1	TRP	A	453	23.832	47.126	56.749	1.00	42.40	N
ATOM 6822	CE2	TRP	A	453	24.515	46.164	56.055	1.00	41.54	C
ATOM 6823	CD2	TRP	A	453	23.706	44.986	56.055	1.00	40.84	C
ATOM 6824	CE3	TRP	A	453	24.181	43.846	55.397	1.00	37.49	C
ATOM 6826	CZ3	TRP	A	453	25.422	43.910	54.728	1.00	36.87	C
ATOM 6828	CH2	TRP	A	453	26.216	45.085	54.767	1.00	37.26	C
ATOM 6830	CZ2	TRP	A	453	25.771	46.226	55.419	1.00	40.29	C
ATOM 6832	C	TRP	A	453	19.210	43.347	56.304	1.00	48.34	C
ATOM 6833	O	TRP	A	453	19.523	42.225	55.960	1.00	48.61	O
ATOM 6834	N	ALA	A	454	18.049	43.569	56.872	1.00	50.12	N
ATOM 6836	CA	ALA	A	454	17.163	42.440	57.046	1.00	52.09	C
ATOM 6838	CB	ALA	A	454	16.100	42.742	58.175	1.00	55.94	C
ATOM 6842	C	ALA	A	454	16.497	41.955	55.731	1.00	52.76	C
ATOM 6843	O	ALA	A	454	16.033	40.830	55.669	1.00	53.28	O
ATOM 6844	N	ALA	A	455	16.438	42.796	54.699	1.00	53.04	N
ATOM 6846	CA	ALA	A	455	15.958	42.371	53.388	1.00	54.61	C
ATOM 6848	CB	ALA	A	455	15.611	43.600	52.415	1.00	55.56	C
ATOM 6852	C	ALA	A	455	17.019	41.447	52.780	1.00	52.15	C
ATOM 6853	O	ALA	A	455	16.713	40.564	51.986	1.00	53.84	O
ATOM 6854	N	LEU	A	456	18.278	41.584	53.144	1.00	48.88	N
ATOM 6856	CA	LEU	A	456	19.207	40.624	52.575	1.00	47.66	C
ATOM 6858	CB	LEU	A	456	20.629	41.111	52.554	1.00	44.76	C
ATOM 6861	CG	LEU	A	456	20.822	42.604	52.299	1.00	47.13	C
ATOM 6863	CD1	LEU	A	456	22.273	42.896	52.676	1.00	47.80	C
ATOM 6867	CD2	LEU	A	456	20.538	43.052	50.860	1.00	46.95	C
ATOM 6871	C	LEU	A	456	19.131	39.306	53.285	1.00	47.43	C
ATOM 6872	O	LEU	A	456	19.433	38.295	52.722	1.00	48.81	O
ATOM 6873	N	PHE	A	457	18.713	39.299	54.520	1.00	48.14	N
ATOM 6875	CA	PHE	A	457	18.752	38.096	55.293	1.00	48.22	C
ATOM 6877	CB	PHE	A	457	18.711	38.449	56.766	1.00	48.21	C
ATOM 6880	CG	PHE	A	457	19.963	39.062	57.277	1.00	44.36	C
ATOM 6881	CD1	PHE	A	457	19.934	39.820	58.425	1.00	44.86	C
ATOM 6883	CE1	PHE	A	457	21.026	40.346	58.984	1.00	42.67	C
ATOM 6885	CZ	PHE	A	457	22.226	40.151	58.400	1.00	43.38	C
ATOM 6887	CE2	PHE	A	457	22.294	39.405	57.247	1.00	43.86	C
ATOM 6889	CD2	PHE	A	457	21.148	38.843	56.690	1.00	42.41	C



ATOM 6891	C	PHE	A	457	17.647	37.119	54.932	1.00	51.40	C
ATOM 6892	O	PHE	A	457	16.662	37.500	54.357	1.00	52.54	O
ATOM 6893	N	GLY	A	458	17.898	35.854	55.274	1.00	52.35	N
ATOM 6895	CA	GLY	A	458	17.023	34.744	55.030	1.00	56.05	C
ATOM 6898	C	GLY	A	458	16.661	33.924	56.238	1.00	58.52	C
ATOM 6899	O	GLY	A	458	15.591	33.315	56.320	1.00	63.06	O
ATOM 6900	N	THR	A	459	17.597	33.823	57.145	1.00	57.90	N
ATOM 6902	CA	THR	A	459	17.361	33.198	58.447	1.00	60.11	C
ATOM 6904	CB	THR	A	459	18.698	32.524	59.028	1.00	58.33	C
ATOM 6906	OG1	THR	A	459	19.443	31.758	58.027	1.00	56.59	O
ATOM 6908	CG2	THR	A	459	18.397	31.515	60.156	1.00	61.86	C
ATOM 6912	C	THR	A	459	16.973	34.339	59.362	1.00	60.43	C
ATOM 6913	O	THR	A	459	17.504	35.455	59.293	1.00	58.76	O
ATOM 6914	N	SER	A	460	16.055	34.063	60.248	1.00	63.77	N
ATOM 6916	CA	SER	A	460	15.832	34.971	61.348	1.00	64.47	C
ATOM 6918	CB	SER	A	460	14.427	34.808	61.931	1.00	69.15	C
ATOM 6921	OG	SER	A	460	14.550	34.108	63.143	1.00	71.63	O
ATOM 6923	C	SER	A	460	16.934	34.647	62.384	1.00	62.22	C
ATOM 6924	O	SER	A	460	17.590	33.555	62.356	1.00	61.49	O
ATOM 6925	N	GLY	A	461	17.164	35.602	63.277	1.00	60.59	N
ATOM 6927	CA	GLY	A	461	18.316	35.494	64.123	1.00	57.63	C
ATOM 6930	C	GLY	A	461	19.585	35.989	63.511	1.00	52.41	C
ATOM 6931	O	GLY	A	461	20.446	36.242	64.286	1.00	52.50	O
ATOM 6932	N	GLN	A	462	19.741	36.137	62.195	1.00	49.52	N
ATOM 6934	CA	GLN	A	462	20.925	36.822	61.668	1.00	45.64	C
ATOM 6936	CB	GLN	A	462	20.952	36.897	60.163	1.00	43.36	C
ATOM 6939	CG	GLN	A	462	21.317	35.605	59.465	1.00	43.36	C
ATOM 6942	CD	GLN	A	462	21.144	35.662	57.939	1.00	42.21	C
ATOM 6943	OE1	GLN	A	462	20.022	35.477	57.420	1.00	43.94	O
ATOM 6944	NE2	GLN	A	462	22.221	35.915	57.237	1.00	38.31	N
ATOM 6947	C	GLN	A	462	21.059	38.245	62.227	1.00	46.14	C
ATOM 6948	O	GLN	A	462	20.063	38.974	62.410	1.00	47.92	O
ATOM 6949	N	LYS	A	463	22.288	38.625	62.523	1.00	44.23	N
ATOM 6951	CA	LYS	A	463	22.533	39.895	63.147	1.00	45.46	C
ATOM 6953	CB	LYS	A	463	23.017	39.668	64.596	1.00	46.79	C
ATOM 6956	CG	LYS	A	463	21.984	38.954	65.430	1.00	55.05	C
ATOM 6959	CD	LYS	A	463	22.139	39.020	67.026	1.00	59.62	C
ATOM 6962	CE	LYS	A	463	20.716	38.916	67.717	1.00	64.36	C
ATOM 6965	NZ	LYS	A	463	20.821	38.672	69.237	1.00	69.48	N
ATOM 6969	C	LYS	A	463	23.603	40.691	62.389	1.00	42.96	C
ATOM 6970	O	LYS	A	463	24.382	40.166	61.581	1.00	39.97	O
ATOM 6971	N	THR	A	464	23.730	41.932	62.818	1.00	43.35	N
ATOM 6973	CA	THR	A	464	24.580	42.878	62.188	1.00	42.23	C
ATOM 6975	CB	THR	A	464	23.583	43.748	61.509	1.00	44.72	C
ATOM 6977	OG1	THR	A	464	23.198	43.095	60.276	1.00	46.76	O
ATOM 6979	CG2	THR	A	464	24.182	45.089	61.116	1.00	46.18	C
ATOM 6983	C	THR	A	464	25.331	43.693	63.198	1.00	41.03	C
ATOM 6984	O	THR	A	464	24.720	44.166	64.099	1.00	43.87	O
ATOM 6985	N	LYS	A	465	26.616	43.918	63.032	1.00	38.29	N
ATOM 6987	CA	LYS	A	465	27.350	44.883	63.862	1.00	37.96	C
ATOM 6989	CB	LYS	A	465	28.365	44.234	64.770	1.00	38.00	C
ATOM 6992	CG	LYS	A	465	27.843	43.601	66.020	1.00	39.95	C
ATOM 6995	CD	LYS	A	465	29.041	42.928	66.733	1.00	39.30	C
ATOM 6998	CE	LYS	A	465	28.550	41.917	67.693	1.00	43.12	C
ATOM 7001	NZ	LYS	A	465	29.446	41.823	68.859	1.00	47.34	N
ATOM 7005	C	LYS	A	465	28.107	45.855	62.997	1.00	35.71	C
ATOM 7006	O	LYS	A	465	29.066	45.520	62.377	1.00	34.33	O
ATOM 7007	N	ILE	A	466	27.686	47.083	63.039	1.00	36.59	N
ATOM 7009	CA	ILE	A	466	28.230	48.113	62.287	1.00	36.36	C
ATOM 7011	CB	ILE	A	466	27.149	48.658	61.458	1.00	37.62	C
ATOM 7013	CG1	ILE	A	466	26.638	47.521	60.575	1.00	39.37	C
ATOM 7016	CD1	ILE	A	466	25.425	47.855	59.830	1.00	43.42	C
ATOM 7020	CG2	ILE	A	466	27.645	49.806	60.602	1.00	36.38	C
ATOM 7024	C	ILE	A	466	28.660	49.060	63.328	1.00	39.00	C
ATOM 7025	O	ILE	A	466	27.884	49.879	63.803	1.00	42.79	O
ATOM 7026	N	ILE	A	467	29.957	49.024	63.565	1.00	39.11	N
ATOM 7028	CA	ILE	A	467	30.596	49.432	64.779	1.00	40.37	C
ATOM 7030	CB	ILE	A	467	31.219	48.212	65.331	1.00	40.16	C

ATOM	7032	CG1	ILE	A	467	30.370	47.332	66.163	1.00	42.73	C
ATOM	7035	CD1	ILE	A	467	31.377	45.982	66.241	1.00	40.48	C
ATOM	7039	CG2	ILE	A	467	32.262	48.549	66.279	1.00	45.19	C
ATOM	7043	C	ILE	A	467	31.840	50.203	64.366	1.00	39.14	C
ATOM	7044	O	ILE	A	467	32.618	49.668	63.547	1.00	36.89	O
ATOM	7045	N	SER	A	468	32.116	51.332	65.040	1.00	40.22	N
ATOM	7047	CA	SER	A	468	33.370	52.094	64.911	1.00	39.83	C
ATOM	7049	CB	SER	A	468	34.462	51.450	65.689	1.00	40.10	C
ATOM	7052	OG	SER	A	468	35.683	52.125	65.536	1.00	44.57	O
ATOM	7054	C	SER	A	468	33.775	52.258	63.472	1.00	38.05	C
ATOM	7055	O	SER	A	468	34.825	51.854	63.028	1.00	35.32	O
ATOM	7056	N	ASN	A	469	32.855	52.838	62.716	1.00	39.19	N
ATOM	7058	CA	ASN	A	469	33.116	53.297	61.394	1.00	38.06	C
ATOM	7060	CB	ASN	A	469	32.120	52.660	60.473	1.00	37.00	C
ATOM	7063	CG	ASN	A	469	32.229	51.158	60.463	1.00	32.67	C
ATOM	7064	OD1	ASN	A	469	33.227	50.572	60.068	1.00	31.21	O
ATOM	7065	ND2	ASN	A	469	31.183	50.536	60.930	1.00	33.32	N
ATOM	7068	C	ASN	A	469	33.072	54.801	61.447	1.00	40.14	C
ATOM	7069	O	ASN	A	469	33.215	55.332	62.487	1.00	41.27	O
ATOM	7070	N	ARG	A	470	32.989	55.479	60.332	1.00	42.08	N
ATOM	7072	CA	ARG	A	470	32.665	56.891	60.330	1.00	46.67	C
ATOM	7074	CB	ARG	A	470	32.810	57.409	58.920	1.00	47.34	C
ATOM	7077	CG	ARG	A	470	32.742	58.880	58.850	1.00	52.09	C
ATOM	7080	CD	ARG	A	470	34.050	59.464	58.571	1.00	55.79	C
ATOM	7083	NE	ARG	A	470	33.944	60.651	57.785	1.00	61.59	N
ATOM	7085	CZ	ARG	A	470	34.946	61.179	57.104	1.00	64.65	C
ATOM	7086	NH1	ARG	A	470	36.169	60.602	57.129	1.00	61.27	N
ATOM	7089	NH2	ARG	A	470	34.710	62.300	56.374	1.00	67.54	N
ATOM	7092	C	ARG	A	470	31.205	57.060	60.710	1.00	49.51	C
ATOM	7093	O	ARG	A	470	30.334	56.385	60.116	1.00	51.46	O
ATOM	7094	N	GLY	A	471	30.864	57.940	61.623	1.00	52.32	N
ATOM	7096	CA	GLY	A	471	29.444	58.051	61.999	1.00	54.41	C
ATOM	7099	C	GLY	A	471	28.409	58.690	61.044	1.00	56.89	C
ATOM	7100	O	GLY	A	471	28.771	59.570	60.204	1.00	58.19	O
ATOM	7101	N	ALA	A	472	27.117	58.276	61.201	1.00	57.50	N
ATOM	7103	CA	ALA	A	472	25.991	58.836	60.402	1.00	59.48	C
ATOM	7105	CB	ALA	A	472	24.529	58.422	60.926	1.00	59.82	C
ATOM	7109	C	ALA	A	472	26.180	60.340	60.361	1.00	62.54	C
ATOM	7110	O	ALA	A	472	25.935	60.936	59.337	1.00	64.71	O
ATOM	7111	N	ASN	A	473	26.708	60.910	61.448	1.00	63.09	N
ATOM	7113	CA	ASN	A	473	26.888	62.359	61.610	1.00	66.39	C
ATOM	7115	CB	ASN	A	473	27.229	62.615	63.117	1.00	67.84	C
ATOM	7118	CG	ASN	A	473	27.465	64.101	63.481	1.00	71.47	C
ATOM	7119	OD1	ASN	A	473	28.533	64.653	63.201	1.00	72.56	O
ATOM	7120	ND2	ASN	A	473	26.517	64.702	64.181	1.00	70.68	N
ATOM	7123	C	ASN	A	473	27.912	62.992	60.665	1.00	66.37	C
ATOM	7124	O	ASN	A	473	27.616	63.960	60.011	1.00	68.02	O
ATOM	7125	N	ALA	A	474	29.133	62.452	60.621	1.00	65.12	N
ATOM	7127	CA	ALA	A	474	30.220	63.060	59.830	1.00	65.88	C
ATOM	7129	CB	ALA	A	474	31.554	62.342	60.019	1.00	62.40	C
ATOM	7133	C	ALA	A	474	29.778	62.956	58.411	1.00	66.42	C
ATOM	7134	O	ALA	A	474	29.829	63.943	57.670	1.00	69.09	O
ATOM	7135	N	CYS	A	475	29.294	61.756	58.068	1.00	64.28	N
ATOM	7137	CA	CYS	A	475	28.846	61.446	56.715	1.00	64.60	C
ATOM	7139	CB	CYS	A	475	28.276	60.046	56.655	1.00	61.39	C
ATOM	7142	SG	CYS	A	475	29.609	58.840	57.005	1.00	61.67	S
ATOM	7143	C	CYS	A	475	27.823	62.441	56.247	1.00	68.38	C
ATOM	7144	O	CYS	A	475	27.945	62.918	55.133	1.00	70.86	O
ATOM	7145	N	ALA	A	476	26.839	62.773	57.096	1.00	69.69	N
ATOM	7147	CA	ALA	A	476	25.739	63.659	56.708	1.00	73.44	C
ATOM	7149	CB	ALA	A	476	24.512	63.632	57.733	1.00	74.87	C
ATOM	7153	C	ALA	A	476	26.315	65.042	56.588	1.00	76.96	C
ATOM	7154	O	ALA	A	476	25.922	65.815	55.746	1.00	80.28	O
ATOM	7155	N	ALA	A	477	27.284	65.326	57.441	1.00	76.83	N
ATOM	7157	CA	ALA	A	477	27.946	66.610	57.480	1.00	79.93	C
ATOM	7159	CB	ALA	A	477	28.692	66.746	58.841	1.00	79.17	C
ATOM	7163	C	ALA	A	477	28.883	66.854	56.259	1.00	80.17	C
ATOM	7164	O	ALA	A	477	29.420	67.924	56.119	1.00	83.71	O

ATOM 7165	N	THR A 478	29.061	65.887	55.367	1.00	77.44	N
ATOM 7167	CA	THR A 478	29.857	66.103	54.148	1.00	78.09	C
ATOM 7169	CB	THR A 478	31.207	65.328	54.184	1.00	74.61	C
ATOM 7171	OG1	THR A 478	31.657	65.181	55.522	1.00	72.75	O
ATOM 7173	CG2	THR A 478	32.284	66.181	53.526	1.00	77.14	C
ATOM 7177	C	THR A 478	29.159	65.664	52.870	1.00	77.93	C
ATOM 7178	O	THR A 478	29.821	65.477	51.834	1.00	78.45	O
ATOM 7179	N	GLY A 479	27.857	65.436	52.920	1.00	77.46	N
ATOM 7181	CA	GLY A 479	27.162	64.913	51.748	1.00	77.03	C
ATOM 7184	C	GLY A 479	27.510	63.493	51.309	1.00	71.99	C
ATOM 7185	O	GLY A 479	27.172	63.096	50.232	1.00	71.57	O
ATOM 7186	N	GLN A 480	28.197	62.715	52.127	1.00	68.57	N
ATOM 7188	CA	GLN A 480	28.453	61.317	51.786	1.00	64.64	C
ATOM 7190	CB	GLN A 480	29.784	60.854	52.334	1.00	61.62	C
ATOM 7193	CG	GLN A 480	30.980	61.814	52.059	1.00	64.83	C
ATOM 7196	CD	GLN A 480	32.316	61.198	52.592	1.00	64.82	C
ATOM 7197	OE1	GLN A 480	32.487	61.054	53.819	1.00	64.21	O
ATOM 7198	NE2	GLN A 480	33.224	60.787	51.671	1.00	62.23	N
ATOM 7201	C	GLN A 480	27.227	60.525	52.300	1.00	63.37	C
ATOM 7202	O	GLN A 480	27.260	59.788	53.314	1.00	61.12	O
ATOM 7203	N	VAL A 481	26.162	60.692	51.514	1.00	64.68	N
ATOM 7205	CA	VAL A 481	24.809	60.368	51.872	1.00	65.06	C
ATOM 7207	CB	VAL A 481	24.167	61.693	52.392	1.00	69.11	C
ATOM 7209	CG1	VAL A 481	22.737	61.873	51.999	1.00	71.00	C
ATOM 7213	CG2	VAL A 481	24.349	61.727	53.885	1.00	68.55	C
ATOM 7217	C	VAL A 481	24.142	59.795	50.629	1.00	65.55	C
ATOM 7218	O	VAL A 481	24.589	60.047	49.535	1.00	66.48	O
ATOM 7219	N	CYS A 482	23.053	59.055	50.768	1.00	69.26	N
ATOM 7221	CA	CYS A 482	22.381	58.508	49.580	1.00	68.72	C
ATOM 7223	CB	CYS A 482	21.207	57.639	49.988	1.00	67.54	C
ATOM 7226	SG	CYS A 482	21.874	56.056	50.630	1.00	70.71	S
ATOM 7227	C	CYS A 482	21.898	59.552	48.623	1.00	69.13	C
ATOM 7228	O	CYS A 482	21.270	60.487	49.030	1.00	70.33	O
ATOM 7229	N	HIS A 483	22.230	59.344	47.354	1.00	68.81	N
ATOM 7231	CA	HIS A 483	21.865	60.191	46.211	1.00	69.88	C
ATOM 7233	CB	HIS A 483	22.206	59.481	44.903	1.00	68.48	C
ATOM 7236	CG	HIS A 483	22.273	60.355	43.700	1.00	69.95	C
ATOM 7237	ND1	HIS A 483	23.344	60.319	42.843	1.00	71.52	N
ATOM 7239	CE1	HIS A 483	23.138	61.154	41.840	1.00	72.59	C
ATOM 7241	NE2	HIS A 483	21.952	61.697	41.998	1.00	71.71	N
ATOM 7243	CD2	HIS A 483	21.383	61.207	43.144	1.00	70.25	C
ATOM 7245	C	HIS A 483	20.394	60.442	46.219	1.00	70.55	C
ATOM 7246	O	HIS A 483	19.633	59.603	46.639	1.00	69.08	O
ATOM 7247	N	ALA A 484	20.033	61.644	45.777	1.00	73.54	N
ATOM 7249	CA	ALA A 484	18.667	62.058	45.466	1.00	74.84	C
ATOM 7251	CB	ALA A 484	18.715	63.282	44.604	1.00	77.22	C
ATOM 7255	C	ALA A 484	17.804	60.997	44.766	1.00	73.78	C
ATOM 7256	O	ALA A 484	16.634	60.816	45.150	1.00	74.54	O
ATOM 7257	N	LEU A 485	18.360	60.294	43.758	1.00	72.45	N
ATOM 7259	CA	LEU A 485	17.549	59.450	42.876	1.00	70.78	C
ATOM 7261	CB	LEU A 485	18.233	59.189	41.526	1.00	69.85	C
ATOM 7264	CG	LEU A 485	18.417	60.352	40.554	1.00	71.18	C
ATOM 7266	CD1	LEU A 485	19.226	59.942	39.360	1.00	68.77	C
ATOM 7270	CD2	LEU A 485	17.087	60.885	40.150	1.00	71.99	C
ATOM 7274	C	LEU A 485	17.292	58.146	43.572	1.00	68.77	C
ATOM 7275	O	LEU A 485	16.758	57.226	42.968	1.00	67.85	O
ATOM 7276	N	CYS A 486	17.658	58.059	44.846	1.00	68.16	N
ATOM 7278	CA	CYS A 486	17.418	56.844	45.588	1.00	66.85	C
ATOM 7280	CB	CYS A 486	18.531	56.547	46.571	1.00	66.88	C
ATOM 7283	SG	CYS A 486	20.068	56.462	45.781	1.00	68.62	S
ATOM 7284	C	CYS A 486	16.216	56.889	46.426	1.00	66.34	C
ATOM 7285	O	CYS A 486	15.944	57.829	47.074	1.00	66.83	O
ATOM 7286	N	SER A 487	15.563	55.767	46.427	1.00	65.87	N
ATOM 7288	CA	SER A 487	14.601	55.373	47.382	1.00	67.61	C
ATOM 7290	CB	SER A 487	14.455	53.894	47.096	1.00	66.72	C
ATOM 7293	OG	SER A 487	13.753	53.245	48.093	1.00	71.71	O
ATOM 7295	C	SER A 487	15.053	55.580	48.835	1.00	68.27	C
ATOM 7296	O	SER A 487	16.270	55.700	49.159	1.00	68.64	O

ATOM 7297	N	PRO A 488	14.094	55.577	49.752	1.00	69.67	N
ATOM 7298	CA	PRO A 488	14.443	55.564	51.181	1.00	69.32	C
ATOM 7300	CB	PRO A 488	13.149	56.052	51.860	1.00	71.17	C
ATOM 7303	CG	PRO A 488	12.071	55.622	50.953	1.00	72.01	C
ATOM 7306	CD	PRO A 488	12.636	55.635	49.538	1.00	71.29	C
ATOM 7309	C	PRO A 488	14.869	54.179	51.626	1.00	67.39	C
ATOM 7310	O	PRO A 488	14.883	53.915	52.804	1.00	67.71	O
ATOM 7311	N	GLU A 489	15.262	53.315	50.688	1.00	66.05	N
ATOM 7313	CA	GLU A 489	15.650	51.931	50.990	1.00	64.34	C
ATOM 7315	CB	GLU A 489	14.944	51.012	49.979	1.00	64.65	C
ATOM 7318	CG	GLU A 489	13.950	49.987	50.564	1.00	66.51	C
ATOM 7321	CD	GLU A 489	13.583	48.907	49.525	1.00	69.58	C
ATOM 7322	OE1	GLU A 489	13.820	47.707	49.835	1.00	69.93	O
ATOM 7323	OE2	GLU A 489	13.131	49.249	48.381	1.00	70.48	O
ATOM 7324	C	GLU A 489	17.197	51.761	50.970	1.00	62.02	C
ATOM 7325	O	GLU A 489	17.725	50.641	50.992	1.00	60.23	O
ATOM 7326	N	GLY A 490	17.902	52.885	50.883	1.00	61.19	N
ATOM 7328	CA	GLY A 490	19.311	52.942	51.176	1.00	60.24	C
ATOM 7331	C	GLY A 490	20.262	52.839	50.001	1.00	59.52	C
ATOM 7332	O	GLY A 490	19.800	52.615	48.891	1.00	59.65	O
ATOM 7333	N	CYS A 491	21.577	52.973	50.241	1.00	58.69	N
ATOM 7335	CA	CYS A 491	22.579	52.834	49.190	1.00	58.30	C
ATOM 7337	CB	CYS A 491	23.088	54.159	48.688	1.00	59.18	C
ATOM 7340	SG	CYS A 491	23.678	55.247	49.964	1.00	59.51	S
ATOM 7341	C	CYS A 491	23.768	52.133	49.698	1.00	58.17	C
ATOM 7342	O	CYS A 491	23.906	52.025	50.870	1.00	60.09	O
ATOM 7343	N	TRP A 492	24.644	51.722	48.785	1.00	57.47	N
ATOM 7345	CA	TRP A 492	25.960	51.167	49.054	1.00	57.58	C
ATOM 7347	CB	TRP A 492	26.198	49.914	48.208	1.00	57.23	C
ATOM 7350	CG	TRP A 492	25.251	48.846	48.427	1.00	56.66	C
ATOM 7351	CD1	TRP A 492	24.125	48.616	47.769	1.00	56.12	C
ATOM 7353	NE1	TRP A 492	23.504	47.505	48.257	1.00	56.13	N
ATOM 7355	CE2	TRP A 492	24.257	47.030	49.275	1.00	56.67	C
ATOM 7356	CD2	TRP A 492	25.367	47.843	49.384	1.00	56.95	C
ATOM 7357	CE3	TRP A 492	26.323	47.539	50.332	1.00	57.68	C
ATOM 7359	CZ3	TRP A 492	26.133	46.504	51.114	1.00	58.09	C
ATOM 7361	CH2	TRP A 492	25.012	45.719	50.987	1.00	57.91	C
ATOM 7363	CZ2	TRP A 492	24.068	45.969	50.056	1.00	57.20	C
ATOM 7365	C	TRP A 492	26.997	52.155	48.596	1.00	58.58	C
ATOM 7366	O	TRP A 492	28.024	51.764	48.120	1.00	59.09	O
ATOM 7367	N	GLY A 493	26.736	53.443	48.717	1.00	59.23	N
ATOM 7369	CA	GLY A 493	27.584	54.415	48.045	1.00	60.57	C
ATOM 7372	C	GLY A 493	26.905	55.667	47.512	1.00	61.34	C
ATOM 7373	O	GLY A 493	25.700	55.817	47.542	1.00	60.80	O
ATOM 7374	N	PRO A 494	27.715	56.602	47.067	1.00	63.04	N
ATOM 7375	CA	PRO A 494	27.223	57.926	46.798	1.00	65.24	C
ATOM 7377	CB	PRO A 494	28.514	58.706	46.562	1.00	67.15	C
ATOM 7380	CG	PRO A 494	29.467	57.738	46.091	1.00	66.26	C
ATOM 7383	CD	PRO A 494	29.148	56.516	46.802	1.00	64.20	C
ATOM 7386	C	PRO A 494	26.328	57.929	45.573	1.00	66.33	C
ATOM 7387	O	PRO A 494	25.317	58.597	45.559	1.00	68.00	O
ATOM 7388	N	GLU A 495	26.684	57.109	44.592	1.00	66.87	N
ATOM 7390	CA	GLU A 495	26.191	57.194	43.228	1.00	67.29	C
ATOM 7392	CB	GLU A 495	27.262	56.599	42.343	1.00	67.64	C
ATOM 7395	CG	GLU A 495	28.401	57.573	42.148	1.00	71.68	C
ATOM 7398	CD	GLU A 495	29.577	56.927	41.440	1.00	76.82	C
ATOM 7399	OE1	GLU A 495	29.470	55.740	40.951	1.00	75.08	O
ATOM 7400	OE2	GLU A 495	30.632	57.625	41.377	1.00	82.21	O
ATOM 7401	C	GLU A 495	24.837	56.544	42.919	1.00	65.80	C
ATOM 7402	O	GLU A 495	24.367	55.692	43.676	1.00	63.46	O
ATOM 7403	N	PRO A 496	24.192	56.963	41.810	1.00	67.18	N
ATOM 7404	CA	PRO A 496	22.872	56.413	41.435	1.00	65.83	C
ATOM 7406	CB	PRO A 496	22.428	57.256	40.256	1.00	66.55	C
ATOM 7409	CG	PRO A 496	23.607	57.978	39.815	1.00	69.03	C
ATOM 7412	CD	PRO A 496	24.636	58.013	40.872	1.00	69.18	C
ATOM 7415	C	PRO A 496	22.869	54.918	41.127	1.00	64.10	C
ATOM 7416	O	PRO A 496	21.872	54.322	41.478	1.00	64.50	O
ATOM 7417	N	ARG A 497	23.927	54.318	40.585	1.00	63.43	N

ATOM 7419	CA	ARG	A	497	23.998	52.856	40.554	1.00	61.81	C
ATOM 7421	CB	ARG	A	497	25.102	52.371	39.600	1.00	62.79	C
ATOM 7424	CG	ARG	A	497	26.384	53.144	39.609	1.00	64.56	C
ATOM 7427	CD	ARG	A	497	27.644	52.336	39.155	1.00	65.35	C
ATOM 7430	NE	ARG	A	497	28.741	52.771	40.030	1.00	68.46	N
ATOM 7432	CZ	ARG	A	497	30.025	52.441	39.960	1.00	68.79	C
ATOM 7433	NH1	ARG	A	497	30.472	51.636	39.000	1.00	68.43	N
ATOM 7436	NH2	ARG	A	497	30.864	52.943	40.888	1.00	69.25	N
ATOM 7439	C	ARG	A	497	24.213	52.199	41.913	1.00	60.94	C
ATOM 7440	O	ARG	A	497	24.213	50.997	42.032	1.00	60.39	O
ATOM 7441	N	ASP	A	498	24.436	52.990	42.939	1.00	61.84	N
ATOM 7443	CA	ASP	A	498	24.624	52.484	44.285	1.00	60.98	C
ATOM 7445	CB	ASP	A	498	25.579	53.410	45.067	1.00	62.53	C
ATOM 7448	CG	ASP	A	498	27.019	53.424	44.503	1.00	62.37	C
ATOM 7449	OD1	ASP	A	498	27.333	52.507	43.754	1.00	63.21	O
ATOM 7450	OD2	ASP	A	498	27.902	54.266	44.765	1.00	61.45	O
ATOM 7451	C	ASP	A	498	23.314	52.291	45.059	1.00	60.30	C
ATOM 7452	O	ASP	A	498	23.324	51.685	46.104	1.00	58.31	O
ATOM 7453	N	CYS	A	499	22.172	52.740	44.543	1.00	61.23	N
ATOM 7455	CA	CYS	A	499	20.943	52.486	45.291	1.00	61.84	C
ATOM 7457	CB	CYS	A	499	19.812	53.357	44.872	1.00	62.74	C
ATOM 7460	SG	CYS	A	499	20.331	54.978	44.411	1.00	66.84	S
ATOM 7461	C	CYS	A	499	20.433	51.076	45.244	1.00	61.36	C
ATOM 7462	O	CYS	A	499	20.878	50.243	44.460	1.00	61.72	O
ATOM 7463	N	VAL	A	500	19.488	50.844	46.136	1.00	61.48	N
ATOM 7465	CA	VAL	A	500	18.869	49.574	46.344	1.00	61.04	C
ATOM 7467	CB	VAL	A	500	18.561	49.388	47.868	1.00	61.98	C
ATOM 7469	CG1	VAL	A	500	17.793	48.079	48.131	1.00	63.20	C
ATOM 7473	CG2	VAL	A	500	19.840	49.433	48.728	1.00	60.20	C
ATOM 7477	C	VAL	A	500	17.588	49.573	45.554	1.00	61.08	C
ATOM 7478	O	VAL	A	500	17.157	48.532	45.141	1.00	61.21	O
ATOM 7479	N	SER	A	501	16.978	50.746	45.391	1.00	61.78	N
ATOM 7481	CA	SER	A	501	15.715	50.963	44.651	1.00	62.67	C
ATOM 7483	CB	SER	A	501	14.496	50.409	45.457	1.00	63.41	C
ATOM 7486	OG	SER	A	501	14.295	50.992	46.745	1.00	62.89	O
ATOM 7488	C	SER	A	501	15.580	52.495	44.276	1.00	64.49	C
ATOM 7489	O	SER	A	501	16.205	53.346	44.915	1.00	65.53	O
ATOM 7490	N	CYS	A	502	14.796	52.870	43.271	1.00	65.42	N
ATOM 7492	CA	CYS	A	502	14.828	54.267	42.789	1.00	67.75	C
ATOM 7494	CB	CYS	A	502	14.768	54.264	41.279	1.00	67.77	C
ATOM 7497	SG	CYS	A	502	16.221	53.363	40.726	1.00	74.29	S
ATOM 7498	C	CYS	A	502	13.720	55.123	43.312	1.00	68.44	C
ATOM 7499	O	CYS	A	502	12.717	54.556	43.656	1.00	69.58	O
ATOM 7500	N	ALA	A	503	13.838	56.455	43.368	1.00	68.92	N
ATOM 7502	CA	ALA	A	503	12.653	57.227	43.798	1.00	71.83	C
ATOM 7504	CB	ALA	A	503	12.941	58.787	44.045	1.00	73.74	C
ATOM 7508	C	ALA	A	503	11.611	57.004	42.683	1.00	72.91	C
ATOM 7509	O	ALA	A	503	10.457	56.658	42.934	1.00	72.96	O
ATOM 7510	N	ASN	A	504	12.089	57.121	41.445	1.00	72.99	N
ATOM 7512	CA	ASN	A	504	11.256	57.123	40.243	1.00	74.36	C
ATOM 7514	CB	ASN	A	504	11.575	58.361	39.406	1.00	75.32	C
ATOM 7517	CG	ASN	A	504	11.494	59.602	40.235	1.00	78.00	C
ATOM 7518	OD1	ASN	A	504	10.412	60.228	40.359	1.00	82.73	O
ATOM 7519	ND2	ASN	A	504	12.596	59.937	40.899	1.00	75.00	N
ATOM 7522	C	ASN	A	504	11.434	55.846	39.457	1.00	73.02	C
ATOM 7523	O	ASN	A	504	10.662	54.873	39.645	1.00	72.93	O
ATOM 7524	N	VAL	A	505	12.501	55.828	38.644	1.00	72.34	N
ATOM 7526	CA	VAL	A	505	12.729	54.790	37.645	1.00	70.30	C
ATOM 7528	CB	VAL	A	505	12.389	55.347	36.278	1.00	71.79	C
ATOM 7530	CG1	VAL	A	505	12.524	54.251	35.263	1.00	71.94	C
ATOM 7534	CG2	VAL	A	505	11.011	55.887	36.245	1.00	72.79	C
ATOM 7538	C	VAL	A	505	14.158	54.374	37.502	1.00	67.81	C
ATOM 7539	O	VAL	A	505	15.046	55.143	37.612	1.00	68.17	O
ATOM 7540	N	SER	A	506	14.376	53.149	37.128	1.00	66.94	N
ATOM 7542	CA	SER	A	506	15.736	52.664	36.881	1.00	65.51	C
ATOM 7544	CB	SER	A	506	15.987	51.363	37.643	1.00	63.70	C
ATOM 7547	OG	SER	A	506	14.880	50.489	37.521	1.00	63.05	O
ATOM 7549	C	SER	A	506	15.894	52.410	35.406	1.00	65.47	C

ATOM	7550	O	SER	A	506	14.922	52.084	34.730	1.00	65.31	O
ATOM	7551	N	ARG	A	507	17.104	52.648	34.920	1.00	66.02	N
ATOM	7553	CA	ARG	A	507	17.563	52.198	33.606	1.00	66.52	C
ATOM	7555	CB	ARG	A	507	18.321	53.306	32.922	1.00	67.29	C
ATOM	7558	CG	ARG	A	507	18.520	53.085	31.458	1.00	67.04	C
ATOM	7561	CD	ARG	A	507	19.211	54.254	30.845	1.00	69.49	C
ATOM	7564	NE	ARG	A	507	18.350	55.355	30.381	1.00	72.58	N
ATOM	7566	CZ	ARG	A	507	18.876	56.525	29.999	1.00	77.80	C
ATOM	7567	NH1	ARG	A	507	20.241	56.684	30.043	1.00	76.65	N
ATOM	7570	NH2	ARG	A	507	18.076	57.514	29.521	1.00	79.53	N
ATOM	7573	C	ARG	A	507	18.500	51.002	33.751	1.00	66.50	C
ATOM	7574	O	ARG	A	507	19.747	51.161	33.656	1.00	66.13	O
ATOM	7575	N	GLY	A	508	17.900	49.833	34.047	1.00	66.65	N
ATOM	7577	CA	GLY	A	508	18.644	48.603	34.086	1.00	65.74	C
ATOM	7580	C	GLY	A	508	19.525	48.460	35.303	1.00	65.94	C
ATOM	7581	O	GLY	A	508	19.625	47.337	35.840	1.00	66.96	O
ATOM	7582	N	ARG	A	509	20.223	49.516	35.730	1.00	66.56	N
ATOM	7584	CA	ARG	A	509	21.083	49.445	36.964	1.00	66.64	C
ATOM	7586	CB	ARG	A	509	22.489	48.881	36.701	1.00	66.71	C
ATOM	7589	CG	ARG	A	509	23.298	49.663	35.556	1.00	69.61	C
ATOM	7592	CD	ARG	A	509	23.416	48.867	34.185	1.00	70.79	C
ATOM	7595	NE	ARG	A	509	24.374	49.468	33.244	1.00	73.28	N
ATOM	7597	CZ	ARG	A	509	25.628	48.985	32.971	1.00	75.15	C
ATOM	7598	NH1	ARG	A	509	26.131	47.881	33.569	1.00	71.78	N
ATOM	7601	NH2	ARG	A	509	26.402	49.636	32.074	1.00	77.07	N
ATOM	7604	C	ARG	A	509	21.264	50.782	37.627	1.00	66.73	C
ATOM	7605	O	ARG	A	509	21.410	50.847	38.811	1.00	67.34	O
ATOM	7606	N	GLU	A	510	21.297	51.853	36.858	1.00	67.08	N
ATOM	7608	CA	GLU	A	510	21.459	53.183	37.434	1.00	67.32	C
ATOM	7610	CB	GLU	A	510	22.246	54.101	36.478	1.00	68.74	C
ATOM	7613	CG	GLU	A	510	21.936	55.585	36.586	1.00	70.35	C
ATOM	7616	CD	GLU	A	510	22.933	56.425	35.809	1.00	74.79	C
ATOM	7617	OE1	GLU	A	510	23.986	55.840	35.426	1.00	74.61	O
ATOM	7618	OE2	GLU	A	510	22.658	57.652	35.572	1.00	77.88	O
ATOM	7619	C	GLU	A	510	20.078	53.729	37.693	1.00	66.81	C
ATOM	7620	O	GLU	A	510	19.137	53.401	36.977	1.00	66.94	O
ATOM	7621	N	CYS	A	511	19.959	54.554	38.719	1.00	66.39	N
ATOM	7623	CA	CYS	A	511	18.693	55.135	39.066	1.00	66.14	C
ATOM	7625	CB	CYS	A	511	18.610	55.343	40.548	1.00	65.95	C
ATOM	7628	SG	CYS	A	511	18.160	53.799	41.363	1.00	62.99	S
ATOM	7629	C	CYS	A	511	18.661	56.414	38.318	1.00	68.45	C
ATOM	7630	O	CYS	A	511	19.671	57.145	38.275	1.00	69.88	O
ATOM	7631	N	VAL	A	512	17.519	56.652	37.670	1.00	69.26	N
ATOM	7633	CA	VAL	A	512	17.284	57.840	36.860	1.00	71.01	C
ATOM	7635	CB	VAL	A	512	17.364	57.499	35.357	1.00	70.31	C
ATOM	7637	CG1	VAL	A	512	17.763	58.724	34.563	1.00	74.73	C
ATOM	7641	CG2	VAL	A	512	18.413	56.495	35.122	1.00	69.40	C
ATOM	7645	C	VAL	A	512	15.961	58.568	37.218	1.00	72.75	C
ATOM	7646	O	VAL	A	512	14.991	57.984	37.710	1.00	71.70	O
ATOM	7647	N	ASP	A	513	15.953	59.871	36.952	1.00	75.55	N
ATOM	7649	CA	ASP	A	513	14.763	60.722	37.132	1.00	78.34	C
ATOM	7651	CB	ASP	A	513	15.195	62.210	37.064	1.00	82.23	C
ATOM	7654	CG	ASP	A	513	15.778	62.604	35.666	1.00	86.47	C
ATOM	7655	OD1	ASP	A	513	16.485	61.724	35.028	1.00	85.95	O
ATOM	7656	OD2	ASP	A	513	15.527	63.750	35.143	1.00	89.04	O
ATOM	7657	C	ASP	A	513	13.600	60.486	36.136	1.00	78.00	C
ATOM	7658	O	ASP	A	513	12.407	60.618	36.490	1.00	78.71	O
ATOM	7659	N	LYS	A	514	13.936	60.184	34.885	1.00	76.63	N
ATOM	7661	CA	LYS	A	514	12.907	60.080	33.832	1.00	77.37	C
ATOM	7663	CB	LYS	A	514	12.661	61.438	33.090	1.00	79.82	C
ATOM	7670	C	LYS	A	514	13.389	59.087	32.841	1.00	74.72	C
ATOM	7671	O	LYS	A	514	14.568	58.916	32.682	1.00	71.86	O
ATOM	7672	N	CYS	A	515	12.473	58.478	32.118	1.00	75.49	N
ATOM	7674	CA	CYS	A	515	12.882	57.736	30.931	1.00	75.27	C
ATOM	7676	CB	CYS	A	515	11.953	56.576	30.660	1.00	74.23	C
ATOM	7679	SG	CYS	A	515	12.029	55.503	32.049	1.00	75.96	S
ATOM	7680	C	CYS	A	515	12.878	58.608	29.723	1.00	77.45	C
ATOM	7681	O	CYS	A	515	12.396	59.736	29.762	1.00	80.72	O

ATOM 7682	N	ASN A 516	13.375	58.047	28.632	1.00	76.28	N
ATOM 7684	CA	ASN A 516	13.450	58.745	27.390	1.00	78.27	C
ATOM 7686	CB	ASN A 516	14.682	58.263	26.628	1.00	76.82	C
ATOM 7689	CG	ASN A 516	15.962	58.751	27.257	1.00	76.59	C
ATOM 7690	OD1	ASN A 516	15.913	59.562	28.158	1.00	76.10	O
ATOM 7691	ND2	ASN A 516	17.118	58.255	26.792	1.00	78.58	N
ATOM 7694	C	ASN A 516	12.162	58.593	26.589	1.00	79.48	C
ATOM 7695	O	ASN A 516	12.214	58.369	25.392	1.00	80.32	O
ATOM 7696	N	LEU A 517	11.005	58.722	27.247	1.00	80.26	N
ATOM 7698	CA	LEU A 517	9.729	58.866	26.540	1.00	81.89	C
ATOM 7700	CB	LEU A 517	8.536	58.802	27.508	1.00	82.29	C
ATOM 7703	CG	LEU A 517	8.472	57.763	28.612	1.00	78.11	C
ATOM 7705	CD1	LEU A 517	7.256	57.874	29.493	1.00	78.46	C
ATOM 7709	CD2	LEU A 517	8.494	56.410	27.960	1.00	77.57	C
ATOM 7713	C	LEU A 517	9.787	60.258	25.953	1.00	85.89	C
ATOM 7714	O	LEU A 517	9.879	61.252	26.730	1.00	89.33	O
ATOM 7715	N	LEU A 518	9.773	60.389	24.633	1.00	86.14	N
ATOM 7717	CA	LEU A 518	9.569	61.731	24.037	1.00	89.84	C
ATOM 7719	CB	LEU A 518	8.620	62.609	24.906	1.00	92.23	C
ATOM 7722	CG	LEU A 518	7.226	62.059	25.263	1.00	91.47	C
ATOM 7724	CD1	LEU A 518	6.556	62.839	26.352	1.00	93.70	C
ATOM 7728	CD2	LEU A 518	6.382	62.115	24.048	1.00	93.66	C
ATOM 7732	C	LEU A 518	10.827	62.542	23.724	1.00	90.91	C
ATOM 7733	O	LEU A 518	10.733	63.588	23.093	1.00	94.73	O
ATOM 7734	N	GLU A 519	11.990	62.050	24.106	1.00	88.21	N
ATOM 7736	CA	GLU A 519	13.211	62.857	24.134	1.00	90.11	C
ATOM 7738	CB	GLU A 519	13.100	64.031	25.150	1.00	92.09	C
ATOM 7745	C	GLU A 519	14.289	61.868	24.579	1.00	87.46	C
ATOM 7746	O	GLU A 519	14.162	61.310	25.671	1.00	86.35	O
ATOM 7747	N	GLY A 520	15.305	61.576	23.753	1.00	87.39	N
ATOM 7749	CA	GLY A 520	16.367	60.664	24.168	1.00	84.28	C
ATOM 7752	C	GLY A 520	17.184	59.916	23.123	1.00	83.49	C
ATOM 7753	O	GLY A 520	16.762	59.776	21.962	1.00	83.56	O
ATOM 7754	N	GLU A 521	18.343	59.402	23.598	1.00	82.41	N
ATOM 7756	CA	GLU A 521	19.346	58.645	22.811	1.00	81.13	C
ATOM 7758	CB	GLU A 521	20.537	58.131	23.652	1.00	79.67	C
ATOM 7765	C	GLU A 521	18.600	57.538	22.157	1.00	78.75	C
ATOM 7766	O	GLU A 521	18.095	57.788	21.071	1.00	81.59	O
ATOM 7767	N	PRO A 522	18.450	56.371	22.786	1.00	75.18	N
ATOM 7768	CA	PRO A 522	17.393	55.446	22.365	1.00	72.91	C
ATOM 7770	CB	PRO A 522	17.911	54.074	22.846	1.00	70.53	C
ATOM 7773	CG	PRO A 522	18.755	54.376	24.063	1.00	70.29	C
ATOM 7776	CD	PRO A 522	19.206	55.822	23.940	1.00	73.90	C
ATOM 7779	C	PRO A 522	16.098	55.838	23.085	1.00	72.50	C
ATOM 7780	O	PRO A 522	16.099	56.091	24.277	1.00	71.74	O
ATOM 7781	N	ARG A 523	15.000	55.914	22.354	1.00	73.17	N
ATOM 7783	CA	ARG A 523	13.700	56.209	22.950	1.00	73.74	C
ATOM 7785	CB	ARG A 523	12.642	56.629	21.883	1.00	75.26	C
ATOM 7794	C	ARG A 523	13.348	54.933	23.704	1.00	70.93	C
ATOM 7795	O	ARG A 523	13.763	53.837	23.330	1.00	68.98	O
ATOM 7796	N	GLU A 524	12.655	55.074	24.817	1.00	71.17	N
ATOM 7798	CA	GLU A 524	12.390	53.915	25.690	1.00	69.50	C
ATOM 7800	CB	GLU A 524	13.381	53.846	26.934	1.00	67.31	C
ATOM 7807	C	GLU A 524	10.900	53.981	26.076	1.00	70.75	C
ATOM 7808	O	GLU A 524	10.278	55.027	25.933	1.00	72.03	O
ATOM 7809	N	PHE A 525	10.339	52.834	26.487	1.00	70.41	N
ATOM 7811	CA	PHE A 525	9.073	52.756	27.238	1.00	71.56	C
ATOM 7813	CB	PHE A 525	8.072	51.852	26.513	1.00	71.53	C
ATOM 7816	CG	PHE A 525	8.376	50.386	26.625	1.00	68.87	C
ATOM 7817	CD1	PHE A 525	7.672	49.582	27.527	1.00	66.88	C
ATOM 7819	CE1	PHE A 525	7.933	48.262	27.624	1.00	65.64	C
ATOM 7821	CZ	PHE A 525	8.923	47.692	26.821	1.00	65.09	C
ATOM 7823	CE2	PHE A 525	9.625	48.470	25.920	1.00	64.47	C
ATOM 7825	CD2	PHE A 525	9.348	49.810	25.824	1.00	66.17	C
ATOM 7827	C	PHE A 525	9.370	52.267	28.663	1.00	70.74	C
ATOM 7828	O	PHE A 525	10.511	52.060	29.014	1.00	69.95	O
ATOM 7829	N	VAL A 526	8.350	52.071	29.478	1.00	72.42	N
ATOM 7831	CA	VAL A 526	8.512	51.804	30.902	1.00	71.94	C

ATOM 7833	CB	VAL	A	526	8.002	52.989	31.696	1.00	73.98	C
ATOM 7835	CG1	VAL	A	526	7.837	52.617	33.185	1.00	75.09	C
ATOM 7839	CG2	VAL	A	526	8.908	54.239	31.481	1.00	74.24	C
ATOM 7843	C	VAL	A	526	7.648	50.632	31.327	1.00	73.13	C
ATOM 7844	O	VAL	A	526	6.495	50.506	30.870	1.00	75.47	O
ATOM 7845	N	GLU	A	527	8.176	49.785	32.218	1.00	72.37	N
ATOM 7847	CA	GLU	A	527	7.356	48.786	32.900	1.00	73.28	C
ATOM 7849	CB	GLU	A	527	7.025	47.568	32.001	1.00	73.10	C
ATOM 7852	CG	GLU	A	527	8.218	46.727	31.521	1.00	71.94	C
ATOM 7855	CD	GLU	A	527	7.836	45.371	30.851	1.00	72.04	C
ATOM 7856	OE1	GLU	A	527	6.743	45.307	30.202	1.00	69.38	O
ATOM 7857	OE2	GLU	A	527	8.648	44.377	30.965	1.00	68.38	O
ATOM 7858	C	GLU	A	527	8.000	48.365	34.226	1.00	72.76	C
ATOM 7859	O	GLU	A	527	9.115	47.824	34.258	1.00	71.27	O
ATOM 7860	N	ASN	A	528	7.244	48.589	35.308	1.00	74.36	N
ATOM 7862	CA	ASN	A	528	7.661	48.313	36.678	1.00	73.60	C
ATOM 7864	CB	ASN	A	528	7.986	46.830	36.923	1.00	72.97	C
ATOM 7867	CG	ASN	A	528	7.226	45.878	35.978	1.00	75.77	C
ATOM 7868	OD1	ASN	A	528	5.990	45.973	35.798	1.00	77.45	O
ATOM 7869	ND2	ASN	A	528	7.978	44.952	35.353	1.00	77.81	N
ATOM 7872	C	ASN	A	528	8.833	49.221	36.924	1.00	71.99	C
ATOM 7873	O	ASN	A	528	9.871	48.815	37.396	1.00	71.09	O
ATOM 7874	N	SER	A	529	8.652	50.478	36.543	1.00	72.85	N
ATOM 7876	CA	SER	A	529	9.608	51.521	36.862	1.00	71.65	C
ATOM 7878	CB	SER	A	529	9.699	51.713	38.387	1.00	72.07	C
ATOM 7881	OG	SER	A	529	8.447	52.198	38.850	1.00	75.50	O
ATOM 7883	C	SER	A	529	10.965	51.223	36.289	1.00	68.41	C
ATOM 7884	O	SER	A	529	11.971	51.654	36.838	1.00	67.15	O
ATOM 7885	N	GLU	A	530	11.000	50.523	35.172	1.00	66.50	N
ATOM 7887	CA	GLU	A	530	12.270	50.325	34.533	1.00	65.30	C
ATOM 7889	CB	GLU	A	530	12.844	48.908	34.841	1.00	64.54	C
ATOM 7892	CG	GLU	A	530	12.086	47.695	34.312	1.00	67.37	C
ATOM 7895	CD	GLU	A	530	12.640	46.360	34.858	1.00	71.17	C
ATOM 7896	OE1	GLU	A	530	13.473	46.411	35.793	1.00	73.46	O
ATOM 7897	OE2	GLU	A	530	12.263	45.242	34.358	1.00	73.29	O
ATOM 7898	C	GLU	A	530	12.191	50.692	33.060	1.00	64.85	C
ATOM 7899	O	GLU	A	530	11.152	50.638	32.500	1.00	65.79	O
ATOM 7900	N	CYS	A	531	13.302	51.128	32.477	1.00	64.45	N
ATOM 7902	CA	CYS	A	531	13.370	51.702	31.133	1.00	65.38	C
ATOM 7904	CB	CYS	A	531	14.157	52.986	31.109	1.00	66.14	C
ATOM 7907	SG	CYS	A	531	13.296	53.919	32.284	1.00	71.12	S
ATOM 7908	C	CYS	A	531	14.000	50.813	30.142	1.00	64.46	C
ATOM 7909	O	CYS	A	531	15.195	50.531	30.187	1.00	63.28	O
ATOM 7910	N	ILE	A	532	13.178	50.491	29.167	1.00	65.37	N
ATOM 7912	CA	ILE	A	532	13.468	49.509	28.187	1.00	65.17	C
ATOM 7914	CB	ILE	A	532	12.381	48.517	28.302	1.00	65.55	C
ATOM 7916	CG1	ILE	A	532	12.447	47.966	29.713	1.00	66.66	C
ATOM 7919	CD1	ILE	A	532	11.359	47.069	29.980	1.00	70.19	C
ATOM 7923	CG2	ILE	A	532	12.541	47.427	27.274	1.00	65.55	C
ATOM 7927	C	ILE	A	532	13.464	50.131	26.825	1.00	65.90	C
ATOM 7928	O	ILE	A	532	12.544	50.839	26.477	1.00	66.89	O
ATOM 7929	N	GLN	A	533	14.500	49.835	26.049	1.00	66.08	N
ATOM 7931	CA	GLN	A	533	14.651	50.416	24.711	1.00	67.62	C
ATOM 7933	CB	GLN	A	533	15.969	49.974	24.060	1.00	67.56	C
ATOM 7936	CG	GLN	A	533	17.233	50.681	24.519	1.00	69.80	C
ATOM 7939	CD	GLN	A	533	18.451	49.923	24.040	1.00	70.83	C
ATOM 7940	OE1	GLN	A	533	18.620	49.748	22.845	1.00	72.01	O
ATOM 7941	NE2	GLN	A	533	19.251	49.412	24.962	1.00	71.14	N
ATOM 7944	C	GLN	A	533	13.558	49.968	23.770	1.00	67.44	C
ATOM 7945	O	GLN	A	533	13.113	48.818	23.791	1.00	65.57	O
ATOM 7946	N	CYS	A	534	13.183	50.881	22.895	1.00	68.65	N
ATOM 7948	CA	CYS	A	534	12.323	50.512	21.786	1.00	69.43	C
ATOM 7950	CB	CYS	A	534	11.753	51.740	21.154	1.00	71.08	C
ATOM 7953	SG	CYS	A	534	10.611	52.557	22.300	1.00	73.86	S
ATOM 7954	C	CYS	A	534	13.126	49.751	20.777	1.00	68.25	C
ATOM 7955	O	CYS	A	534	14.262	50.108	20.508	1.00	68.52	O
ATOM 7956	N	HIS	A	535	12.543	48.707	20.222	1.00	66.84	N
ATOM 7958	CA	HIS	A	535	13.212	48.012	19.163	1.00	65.78	C



ATOM 7960	CB	HIS	A	535	12.216	47.085	18.497	1.00	66.02	C
ATOM 7963	CG	HIS	A	535	12.824	46.218	17.462	1.00	64.32	C
ATOM 7964	ND1	HIS	A	535	13.031	46.638	16.175	1.00	61.92	N
ATOM 7966	CE1	HIS	A	535	13.599	45.677	15.489	1.00	64.12	C
ATOM 7968	NE2	HIS	A	535	13.800	44.658	16.299	1.00	65.31	N
ATOM 7970	CD2	HIS	A	535	13.337	44.980	17.543	1.00	64.19	C
ATOM 7972	C	HIS	A	535	13.822	49.045	18.165	1.00	66.70	C
ATOM 7973	O	HIS	A	535	13.217	50.069	17.907	1.00	68.03	O
ATOM 7974	N	PRO	A	536	15.028	48.800	17.637	1.00	66.72	N
ATOM 7975	CA	PRO	A	536	15.804	49.881	16.971	1.00	67.56	C
ATOM 7977	CB	PRO	A	536	17.231	49.296	16.821	1.00	67.39	C
ATOM 7980	CG	PRO	A	536	17.085	47.783	16.953	1.00	66.07	C
ATOM 7983	CD	PRO	A	536	15.762	47.502	17.657	1.00	65.17	C
ATOM 7986	C	PRO	A	536	15.311	50.179	15.631	1.00	68.62	C
ATOM 7987	O	PRO	A	536	15.855	51.051	14.996	1.00	70.04	O
ATOM 7988	N	GLU	A	537	14.367	49.374	15.170	1.00	68.61	N
ATOM 7990	CA	GLU	A	537	13.650	49.638	13.937	1.00	69.99	C
ATOM 7992	CB	GLU	A	537	13.211	48.324	13.277	1.00	68.51	C
ATOM 7995	CG	GLU	A	537	14.325	47.611	12.610	1.00	68.09	C
ATOM 7998	CD	GLU	A	537	15.045	48.492	11.626	1.00	70.66	C
ATOM 7999	OE1	GLU	A	537	14.402	49.367	11.003	1.00	74.79	O
ATOM 8000	OE2	GLU	A	537	16.267	48.319	11.485	1.00	72.71	O
ATOM 8001	C	GLU	A	537	12.418	50.521	14.139	1.00	71.72	C
ATOM 8002	O	GLU	A	537	11.672	50.711	13.201	1.00	74.11	O
ATOM 8003	N	CYS	A	538	12.169	51.060	15.325	1.00	71.85	N
ATOM 8005	CA	CYS	A	538	11.143	52.088	15.421	1.00	73.89	C
ATOM 8007	CB	CYS	A	538	10.500	52.152	16.780	1.00	74.04	C
ATOM 8010	SG	CYS	A	538	9.888	50.553	17.320	1.00	72.72	S
ATOM 8011	C	CYS	A	538	11.770	53.404	15.135	1.00	75.65	C
ATOM 8012	O	CYS	A	538	12.918	53.645	15.498	1.00	74.35	O
ATOM 8013	N	LEU	A	539	10.989	54.235	14.445	1.00	78.81	N
ATOM 8015	CA	LEU	A	539	11.368	55.584	14.097	1.00	81.09	C
ATOM 8017	CB	LEU	A	539	10.672	55.993	12.829	1.00	83.53	C
ATOM 8020	CG	LEU	A	539	11.126	57.328	12.277	1.00	86.35	C
ATOM 8022	CD1	LEU	A	539	12.585	57.287	11.828	1.00	85.10	C
ATOM 8026	CD2	LEU	A	539	10.163	57.659	11.175	1.00	88.79	C
ATOM 8030	C	LEU	A	539	10.960	56.483	15.249	1.00	82.49	C
ATOM 8031	O	LEU	A	539	9.773	56.549	15.611	1.00	82.07	O
ATOM 8032	N	PRO	A	540	11.968	57.076	15.893	1.00	83.31	N
ATOM 8033	CA	PRO	A	540	11.736	58.147	16.878	1.00	84.93	C
ATOM 8035	CB	PRO	A	540	13.129	58.776	17.104	1.00	85.34	C
ATOM 8038	CG	PRO	A	540	14.139	57.881	16.384	1.00	84.21	C
ATOM 8041	CD	PRO	A	540	13.398	56.694	15.818	1.00	81.81	C
ATOM 8044	C	PRO	A	540	10.784	59.185	16.374	1.00	88.12	C
ATOM 8045	O	PRO	A	540	10.908	59.595	15.238	1.00	89.43	O
ATOM 8046	N	GLN	A	541	9.886	59.604	17.258	1.00	89.34	N
ATOM 8048	CA	GLN	A	541	8.794	60.495	16.962	1.00	92.72	C
ATOM 8050	CB	GLN	A	541	7.463	59.830	17.324	1.00	92.16	C
ATOM 8053	CG	GLN	A	541	7.171	58.527	16.577	1.00	89.77	C
ATOM 8056	CD	GLN	A	541	6.354	58.684	15.285	1.00	92.88	C
ATOM 8057	OE1	GLN	A	541	5.697	59.736	15.027	1.00	96.32	O
ATOM 8058	NE2	GLN	A	541	6.385	57.629	14.462	1.00	88.98	N
ATOM 8061	C	GLN	A	541	8.961	61.755	17.791	1.00	95.58	C
ATOM 8062	O	GLN	A	541	8.962	61.700	19.017	1.00	93.76	O
ATOM 8063	N	ALA	A	542	9.043	62.898	17.103	1.00	100.12	N
ATOM 8065	CA	ALA	A	542	9.171	64.199	17.758	1.00	103.21	C
ATOM 8067	CB	ALA	A	542	9.082	65.306	16.720	1.00	107.95	C
ATOM 8071	C	ALA	A	542	8.092	64.366	18.819	1.00	104.03	C
ATOM 8072	O	ALA	A	542	8.396	64.498	19.999	1.00	103.11	O
ATOM 8073	N	MET	A	543	6.834	64.281	18.400	1.00	105.83	N
ATOM 8075	CA	MET	A	543	5.718	64.631	19.277	1.00	108.35	C
ATOM 8077	CB	MET	A	543	4.430	64.701	18.477	1.00	111.35	C
ATOM 8080	CG	MET	A	543	4.523	65.603	17.241	1.00	116.25	C
ATOM 8083	SD	MET	A	543	4.822	67.395	17.470	1.00	123.15	S
ATOM 8084	CE	MET	A	543	6.486	67.662	18.473	1.00	119.09	C
ATOM 8088	C	MET	A	543	5.518	63.708	20.482	1.00	105.56	C
ATOM 8089	O	MET	A	543	5.645	64.161	21.642	1.00	105.64	O
ATOM 8090	N	ASN	A	544	5.215	62.425	20.192	1.00	102.85	N

ATOM 8092	CA	ASN	A	544	4.756	61.436	21.189	1.00	99.69	C
ATOM 8094	CB	ASN	A	544	3.440	60.756	20.758	1.00	100.63	C
ATOM 8097	CG	ASN	A	544	2.311	61.737	20.593	1.00	106.66	C
ATOM 8098	OD1	ASN	A	544	2.108	62.599	21.452	1.00	113.63	O
ATOM 8099	ND2	ASN	A	544	1.587	61.647	19.474	1.00	107.70	N
ATOM 8102	C	ASN	A	544	5.730	60.329	21.403	1.00	94.33	C
ATOM 8103	O	ASN	A	544	6.730	60.230	20.713	1.00	93.08	O
ATOM 8104	N	ILE	A	545	5.400	59.553	22.433	1.00	91.45	N
ATOM 8106	CA	ILE	A	545	5.741	58.160	22.629	1.00	86.98	C
ATOM 8108	CB	ILE	A	545	4.474	57.465	23.309	1.00	86.92	C
ATOM 8110	CG1	ILE	A	545	4.672	57.482	24.841	1.00	89.02	C
ATOM 8113	CD1	ILE	A	545	3.522	56.919	25.781	1.00	91.04	C
ATOM 8117	CG2	ILE	A	545	4.136	56.089	22.768	1.00	82.26	C
ATOM 8121	C	ILE	A	545	6.144	57.489	21.337	1.00	86.03	C
ATOM 8122	O	ILE	A	545	5.452	57.604	20.316	1.00	88.94	O
ATOM 8123	N	THR	A	546	7.267	56.788	21.380	1.00	82.71	N
ATOM 8125	CA	THR	A	546	7.828	56.125	20.215	1.00	80.76	C
ATOM 8127	CB	THR	A	546	9.312	56.458	20.162	1.00	79.71	C
ATOM 8129	OG1	THR	A	546	9.431	57.779	19.651	1.00	81.40	O
ATOM 8131	CG2	THR	A	546	10.108	55.583	19.160	1.00	77.72	C
ATOM 8135	C	THR	A	546	7.623	54.612	20.203	1.00	78.40	C
ATOM 8136	O	THR	A	546	8.110	53.971	19.274	1.00	76.95	O
ATOM 8137	N	CYS	A	547	6.944	54.045	21.218	1.00	77.55	N
ATOM 8139	CA	CYS	A	547	6.542	52.622	21.189	1.00	76.32	C
ATOM 8141	CB	CYS	A	547	7.766	51.712	21.067	1.00	73.37	C
ATOM 8144	SG	CYS	A	547	8.789	51.650	22.513	1.00	73.09	S
ATOM 8145	C	CYS	A	547	5.688	52.116	22.344	1.00	75.94	C
ATOM 8146	O	CYS	A	547	5.642	52.743	23.343	1.00	76.38	O
ATOM 8147	N	THR	A	548	5.047	50.955	22.188	1.00	76.01	N
ATOM 8149	CA	THR	A	548	4.280	50.292	23.254	1.00	76.89	C
ATOM 8151	CB	THR	A	548	3.066	49.538	22.668	1.00	78.86	C
ATOM 8153	OG1	THR	A	548	2.220	50.450	21.967	1.00	82.65	O
ATOM 8155	CG2	THR	A	548	2.142	48.955	23.780	1.00	80.14	C
ATOM 8159	C	THR	A	548	5.071	49.259	24.089	1.00	74.79	C
ATOM 8160	O	THR	A	548	4.572	48.822	25.099	1.00	75.56	O
ATOM 8161	N	GLY	A	549	6.289	48.875	23.701	1.00	72.66	N
ATOM 8163	CA	GLY	A	549	6.888	47.643	24.191	1.00	70.37	C
ATOM 8166	C	GLY	A	549	7.998	47.174	23.273	1.00	69.28	C
ATOM 8167	O	GLY	A	549	8.481	47.923	22.394	1.00	69.27	O
ATOM 8168	N	ARG	A	550	8.370	45.904	23.434	1.00	68.41	N
ATOM 8170	CA	ARG	A	550	9.617	45.393	22.863	1.00	66.94	C
ATOM 8172	CB	ARG	A	550	10.066	44.051	23.463	1.00	66.83	C
ATOM 8175	CG	ARG	A	550	9.594	43.646	24.804	1.00	67.69	C
ATOM 8178	CD	ARG	A	550	10.696	43.065	25.661	1.00	67.99	C
ATOM 8181	NE	ARG	A	550	10.467	43.536	27.012	1.00	68.71	N
ATOM 8183	CZ	ARG	A	550	11.350	43.538	27.946	1.00	68.02	C
ATOM 8184	NH1	ARG	A	550	12.548	43.056	27.689	1.00	71.35	N
ATOM 8187	NH2	ARG	A	550	11.035	43.998	29.154	1.00	67.97	N
ATOM 8190	C	ARG	A	550	9.593	45.083	21.401	1.00	67.18	C
ATOM 8191	O	ARG	A	550	10.654	45.058	20.759	1.00	65.99	O
ATOM 8192	N	GLY	A	551	8.434	44.712	20.882	1.00	68.91	N
ATOM 8194	CA	GLY	A	551	8.428	44.078	19.566	1.00	69.72	C
ATOM 8197	C	GLY	A	551	8.984	44.980	18.462	1.00	69.41	C
ATOM 8198	O	GLY	A	551	9.184	46.175	18.685	1.00	69.05	O
ATOM 8199	N	PRO	A	552	9.316	44.417	17.307	1.00	69.02	N
ATOM 8200	CA	PRO	A	552	9.076	45.130	16.050	1.00	70.16	C
ATOM 8202	CB	PRO	A	552	9.704	44.221	14.988	1.00	69.01	C
ATOM 8205	CG	PRO	A	552	9.805	42.977	15.585	1.00	68.43	C
ATOM 8208	CD	PRO	A	552	10.065	43.179	17.085	1.00	67.57	C
ATOM 8211	C	PRO	A	552	7.584	45.371	15.794	1.00	72.55	C
ATOM 8212	O	PRO	A	552	7.216	46.194	14.960	1.00	74.90	O
ATOM 8213	N	ASP	A	553	6.708	44.702	16.518	1.00	73.65	N
ATOM 8215	CA	ASP	A	553	5.288	44.960	16.308	1.00	76.41	C
ATOM 8217	CB	ASP	A	553	4.482	43.789	16.845	1.00	77.64	C
ATOM 8220	CG	ASP	A	553	4.690	42.533	16.029	1.00	80.59	C
ATOM 8221	OD1	ASP	A	553	5.877	42.294	15.647	1.00	83.78	O
ATOM 8222	OD2	ASP	A	553	3.750	41.737	15.698	1.00	84.59	O
ATOM 8223	C	ASP	A	553	4.864	46.275	16.990	1.00	77.13	C

ATOM 8224	O	ASP	A	553	4.011	47.012	16.498	1.00	79.38	O
ATOM 8225	N	ASN	A	554	5.493	46.576	18.117	1.00	75.22	N
ATOM 8227	CA	ASN	A	554	5.081	47.687	18.953	1.00	75.56	C
ATOM 8229	CB	ASN	A	554	5.296	47.312	20.423	1.00	75.01	C
ATOM 8232	CG	ASN	A	554	4.457	46.113	20.854	1.00	76.66	C
ATOM 8233	OD1	ASN	A	554	3.321	45.920	20.378	1.00	79.39	O
ATOM 8234	ND2	ASN	A	554	5.013	45.299	21.759	1.00	76.10	N
ATOM 8237	C	ASN	A	554	5.763	49.021	18.653	1.00	74.89	C
ATOM 8238	O	ASN	A	554	5.884	49.859	19.531	1.00	73.74	O
ATOM 8239	N	CYS	A	555	6.191	49.225	17.414	1.00	74.76	N
ATOM 8241	CA	CYS	A	555	6.585	50.553	16.971	1.00	76.15	C
ATOM 8243	CB	CYS	A	555	7.378	50.459	15.691	1.00	75.87	C
ATOM 8246	SG	CYS	A	555	8.888	49.525	15.840	1.00	74.07	S
ATOM 8247	C	CYS	A	555	5.378	51.399	16.664	1.00	79.28	C
ATOM 8248	O	CYS	A	555	4.303	50.908	16.314	1.00	80.23	O
ATOM 8249	N	ILE	A	556	5.549	52.690	16.757	1.00	81.45	N
ATOM 8251	CA	ILE	A	556	4.588	53.558	16.076	1.00	86.21	C
ATOM 8253	CB	ILE	A	556	4.217	54.775	16.994	1.00	88.59	C
ATOM 8255	CG1	ILE	A	556	3.285	54.332	18.145	1.00	88.42	C
ATOM 8258	CD1	ILE	A	556	2.945	55.465	19.180	1.00	90.10	C
ATOM 8262	CG2	ILE	A	556	3.656	55.923	16.146	1.00	91.71	C
ATOM 8266	C	ILE	A	556	5.349	54.028	14.841	1.00	86.58	C
ATOM 8267	O	ILE	A	556	6.353	54.729	14.990	1.00	89.16	O
ATOM 8268	N	GLN	A	557	4.994	53.618	13.653	1.00	85.39	N
ATOM 8270	CA	GLN	A	557	5.882	53.937	12.530	1.00	85.32	C
ATOM 8272	CB	GLN	A	557	6.184	55.456	12.453	1.00	87.88	C
ATOM 8275	CG	GLN	A	557	6.910	55.832	11.136	1.00	89.41	C
ATOM 8278	CD	GLN	A	557	6.557	57.164	10.557	1.00	91.93	C
ATOM 8279	OE1	GLN	A	557	6.459	58.148	11.270	1.00	95.30	O
ATOM 8280	NE2	GLN	A	557	6.423	57.209	9.247	1.00	92.15	N
ATOM 8283	C	GLN	A	557	7.229	53.165	12.420	1.00	81.67	C
ATOM 8284	O	GLN	A	557	8.085	53.251	13.261	1.00	80.12	O
ATOM 8285	N	CYS	A	558	7.428	52.507	11.295	1.00	81.23	N
ATOM 8287	CA	CYS	A	558	8.641	51.768	11.012	1.00	79.48	C
ATOM 8289	CB	CYS	A	558	8.296	50.683	10.007	1.00	79.37	C
ATOM 8292	SG	CYS	A	558	7.573	49.169	10.702	1.00	81.19	S
ATOM 8293	C	CYS	A	558	9.759	52.580	10.388	1.00	79.80	C
ATOM 8294	O	CYS	A	558	9.589	53.173	9.377	1.00	81.16	O
ATOM 8295	N	ALA	A	559	10.950	52.512	10.935	1.00	78.94	N
ATOM 8297	CA	ALA	A	559	12.079	53.313	10.421	1.00	80.38	C
ATOM 8299	CB	ALA	A	559	13.371	53.087	11.285	1.00	78.77	C
ATOM 8303	C	ALA	A	559	12.432	53.046	8.989	1.00	80.70	C
ATOM 8304	O	ALA	A	559	12.772	53.965	8.290	1.00	83.71	O
ATOM 8305	N	HIS	A	560	12.415	51.785	8.580	1.00	78.83	N
ATOM 8307	CA	HIS	A	560	13.025	51.377	7.327	1.00	78.93	C
ATOM 8309	CB	HIS	A	560	14.232	50.473	7.616	1.00	77.41	C
ATOM 8312	CG	HIS	A	560	15.521	51.202	7.931	1.00	79.72	C
ATOM 8313	ND1	HIS	A	560	16.068	52.180	7.112	1.00	82.70	N
ATOM 8315	CE1	HIS	A	560	17.212	52.607	7.631	1.00	84.13	C
ATOM 8317	NE2	HIS	A	560	17.429	51.939	8.758	1.00	83.15	N
ATOM 8319	CD2	HIS	A	560	16.395	51.050	8.962	1.00	79.11	C
ATOM 8321	C	HIS	A	560	11.932	50.680	6.503	1.00	78.66	C
ATOM 8322	O	HIS	A	560	11.189	51.365	5.825	1.00	81.48	O
ATOM 8323	N	TYR	A	561	11.771	49.354	6.575	1.00	76.45	N
ATOM 8325	CA	TYR	A	561	10.666	48.684	5.844	1.00	76.16	C
ATOM 8327	CB	TYR	A	561	11.162	47.651	4.814	1.00	75.26	C
ATOM 8330	CG	TYR	A	561	12.188	48.263	3.937	1.00	76.43	C
ATOM 8331	CD1	TYR	A	561	13.544	48.158	4.251	1.00	76.49	C
ATOM 8333	CE1	TYR	A	561	14.514	48.770	3.507	1.00	77.50	C
ATOM 8335	CZ	TYR	A	561	14.133	49.520	2.438	1.00	81.83	C
ATOM 8336	OH	TYR	A	561	15.079	50.155	1.675	1.00	86.33	O
ATOM 8338	CE2	TYR	A	561	12.789	49.645	2.097	1.00	82.34	C
ATOM 8340	CD2	TYR	A	561	11.824	49.028	2.861	1.00	79.04	C
ATOM 8342	C	TYR	A	561	9.733	48.040	6.820	1.00	74.68	C
ATOM 8343	O	TYR	A	561	10.052	47.969	8.013	1.00	72.79	O
ATOM 8344	N	ILE	A	562	8.576	47.624	6.285	1.00	75.37	N
ATOM 8346	CA	ILE	A	562	7.533	46.899	7.014	1.00	75.42	C
ATOM 8348	CB	ILE	A	562	6.207	47.710	7.246	1.00	77.81	C

ATOM 8350	CG1	ILE	A	562	6.473	49.235	7.482	1.00	81.60	C
ATOM 8353	CD1	ILE	A	562	5.649	50.324	6.529	1.00	83.69	C
ATOM 8357	CG2	ILE	A	562	5.419	47.117	8.432	1.00	75.53	C
ATOM 8361	C	ILE	A	562	7.189	45.624	6.263	1.00	75.08	C
ATOM 8362	O	ILE	A	562	6.904	45.638	5.077	1.00	75.61	O
ATOM 8363	N	ASP	A	563	7.225	44.529	7.012	1.00	73.98	N
ATOM 8365	CA	ASP	A	563	6.927	43.193	6.553	1.00	73.94	C
ATOM 8367	CB	ASP	A	563	8.170	42.341	6.827	1.00	72.30	C
ATOM 8370	CG	ASP	A	563	8.107	40.945	6.226	1.00	72.50	C
ATOM 8371	OD1	ASP	A	563	7.372	40.727	5.229	1.00	70.35	O
ATOM 8372	OD2	ASP	A	563	8.822	40.012	6.712	1.00	72.64	O
ATOM 8373	C	ASP	A	563	5.760	42.742	7.401	1.00	74.39	C
ATOM 8374	O	ASP	A	563	5.902	42.627	8.612	1.00	73.65	O
ATOM 8375	N	GLY	A	564	4.600	42.522	6.796	1.00	75.74	N
ATOM 8377	CA	GLY	A	564	3.414	42.251	7.590	1.00	77.02	C
ATOM 8380	C	GLY	A	564	3.269	43.192	8.781	1.00	76.38	C
ATOM 8381	O	GLY	A	564	3.406	44.373	8.626	1.00	75.98	O
ATOM 8382	N	PRO	A	565	2.992	42.679	9.966	1.00	76.69	N
ATOM 8383	CA	PRO	A	565	2.937	43.529	11.162	1.00	77.09	C
ATOM 8385	CB	PRO	A	565	2.388	42.599	12.264	1.00	77.30	C
ATOM 8388	CG	PRO	A	565	2.710	41.225	11.789	1.00	77.15	C
ATOM 8391	CD	PRO	A	565	2.673	41.277	10.276	1.00	77.40	C
ATOM 8394	C	PRO	A	565	4.264	44.083	11.612	1.00	75.13	C
ATOM 8395	O	PRO	A	565	4.210	45.061	12.315	1.00	76.23	O
ATOM 8396	N	HIS	A	566	5.389	43.477	11.245	1.00	73.76	N
ATOM 8398	CA	HIS	A	566	6.707	43.775	11.819	1.00	71.93	C
ATOM 8400	CB	HIS	A	566	7.618	42.556	11.660	1.00	70.47	C
ATOM 8403	CG	HIS	A	566	7.029	41.249	12.095	1.00	70.87	C
ATOM 8404	ND1	HIS	A	566	7.119	40.789	13.387	1.00	71.81	N
ATOM 8406	CE1	HIS	A	566	6.566	39.590	13.461	1.00	74.18	C
ATOM 8408	NE2	HIS	A	566	6.133	39.251	12.260	1.00	73.76	N
ATOM 8410	CD2	HIS	A	566	6.430	40.264	11.386	1.00	72.64	C
ATOM 8412	C	HIS	A	566	7.442	44.879	11.078	1.00	72.22	C
ATOM 8413	O	HIS	A	566	7.337	44.943	9.859	1.00	74.16	O
ATOM 8414	N	CYS	A	567	8.246	45.687	11.769	1.00	71.03	N
ATOM 8416	CA	CYS	A	567	9.234	46.549	11.105	1.00	70.86	C
ATOM 8418	CB	CYS	A	567	9.604	47.726	11.972	1.00	71.52	C
ATOM 8421	SG	CYS	A	567	8.241	48.666	12.577	1.00	73.87	S
ATOM 8422	C	CYS	A	567	10.530	45.832	10.962	1.00	69.04	C
ATOM 8423	O	CYS	A	567	11.035	45.332	11.937	1.00	68.08	O
ATOM 8424	N	VAL	A	568	11.128	45.862	9.788	1.00	69.34	N
ATOM 8426	CA	VAL	A	568	12.431	45.284	9.614	1.00	68.53	C
ATOM 8428	CB	VAL	A	568	12.355	44.035	8.788	1.00	69.32	C
ATOM 8430	CG1	VAL	A	568	13.574	42.972	9.226	1.00	69.18	C
ATOM 8434	CG2	VAL	A	568	10.953	43.396	8.907	1.00	70.17	C
ATOM 8438	C	VAL	A	568	13.381	46.205	8.951	1.00	68.70	C
ATOM 8439	O	VAL	A	568	12.953	47.118	8.287	1.00	71.27	O
ATOM 8440	N	LYS	A	569	14.673	45.970	9.158	1.00	67.78	N
ATOM 8442	CA	LYS	A	569	15.725	46.687	8.455	1.00	69.12	C
ATOM 8444	CB	LYS	A	569	17.100	46.328	9.026	1.00	68.55	C
ATOM 8447	CG	LYS	A	569	18.246	47.213	8.440	1.00	72.13	C
ATOM 8450	CD	LYS	A	569	19.587	47.155	9.229	1.00	73.34	C
ATOM 8453	CE	LYS	A	569	20.258	48.558	9.307	1.00	75.82	C
ATOM 8456	NZ	LYS	A	569	21.618	48.573	9.964	1.00	77.31	N
ATOM 8460	C	LYS	A	569	15.732	46.425	6.945	1.00	70.04	C
ATOM 8461	O	LYS	A	569	16.006	47.328	6.144	1.00	71.03	O
ATOM 8462	N	THR	A	570	15.498	45.170	6.573	1.00	69.61	N
ATOM 8464	CA	THR	A	570	15.401	44.774	5.179	1.00	70.80	C
ATOM 8466	CB	THR	A	570	16.551	43.874	4.758	1.00	70.64	C
ATOM 8468	OG1	THR	A	570	17.678	44.132	5.574	1.00	69.69	O
ATOM 8470	CG2	THR	A	570	17.028	44.225	3.290	1.00	73.62	C
ATOM 8474	C	THR	A	570	14.147	43.992	4.941	1.00	71.10	C
ATOM 8475	O	THR	A	570	13.566	43.417	5.860	1.00	70.34	O
ATOM 8476	N	CYS	A	571	13.727	43.956	3.684	1.00	72.17	N
ATOM 8478	CA	CYS	A	571	12.740	42.992	3.308	1.00	72.52	C
ATOM 8480	CB	CYS	A	571	12.089	43.404	2.008	1.00	74.33	C
ATOM 8483	SG	CYS	A	571	10.724	44.604	2.195	1.00	78.47	S
ATOM 8484	C	CYS	A	571	13.468	41.631	3.216	1.00	71.56	C

ATOM 8485	O	CYS A 571	14.624	41.563	2.831	1.00	71.33	O
ATOM 8486	N	PRO A 572	12.807	40.570	3.634	1.00	71.21	N
ATOM 8487	CA	PRO A 572	13.365	39.208	3.601	1.00	70.85	C
ATOM 8489	CB	PRO A 572	12.172	38.339	3.923	1.00	71.07	C
ATOM 8492	CG	PRO A 572	11.307	39.225	4.741	1.00	72.16	C
ATOM 8495	CD	PRO A 572	11.470	40.617	4.231	1.00	71.58	C
ATOM 8498	C	PRO A 572	13.861	38.806	2.253	1.00	71.37	C
ATOM 8499	O	PRO A 572	13.118	38.873	1.309	1.00	71.71	O
ATOM 8500	N	ALA A 573	15.091	38.332	2.192	1.00	71.59	N
ATOM 8502	CA	ALA A 573	15.743	37.986	0.933	1.00	72.60	C
ATOM 8504	CB	ALA A 573	16.655	39.103	0.532	1.00	72.49	C
ATOM 8508	C	ALA A 573	16.537	36.667	1.074	1.00	72.93	C
ATOM 8509	O	ALA A 573	17.586	36.608	1.717	1.00	73.24	O
ATOM 8510	N	GLY A 574	16.044	35.603	0.472	1.00	73.55	N
ATOM 8512	CA	GLY A 574	16.781	34.355	0.481	1.00	75.15	C
ATOM 8515	C	GLY A 574	16.810	33.712	1.853	1.00	74.56	C
ATOM 8516	O	GLY A 574	17.826	33.607	2.501	1.00	74.55	O
ATOM 8517	N	VAL A 575	15.638	33.301	2.271	1.00	74.53	N
ATOM 8519	CA	VAL A 575	15.376	32.861	3.612	1.00	74.16	C
ATOM 8521	CB	VAL A 575	14.468	33.930	4.276	1.00	72.51	C
ATOM 8523	CG1	VAL A 575	13.634	33.376	5.319	1.00	73.47	C
ATOM 8527	CG2	VAL A 575	15.322	34.978	4.860	1.00	70.07	C
ATOM 8531	C	VAL A 575	14.734	31.494	3.412	1.00	75.88	C
ATOM 8532	O	VAL A 575	14.015	31.284	2.455	1.00	76.15	O
ATOM 8533	N	MET A 576	15.001	30.517	4.243	1.00	77.05	N
ATOM 8535	CA	MET A 576	14.451	29.252	3.827	1.00	79.91	C
ATOM 8537	CB	MET A 576	15.111	28.104	4.533	1.00	81.42	C
ATOM 8540	CG	MET A 576	14.645	26.801	3.936	1.00	85.73	C
ATOM 8543	SD	MET A 576	14.960	26.651	2.151	1.00	89.21	S
ATOM 8544	CE	MET A 576	16.879	26.184	2.371	1.00	90.57	C
ATOM 8548	C	MET A 576	12.921	29.212	3.989	1.00	80.55	C
ATOM 8549	O	MET A 576	12.415	29.721	4.978	1.00	79.42	O
ATOM 8550	N	GLY A 577	12.218	28.602	3.012	1.00	82.68	N
ATOM 8552	CA	GLY A 577	10.765	28.366	3.050	1.00	84.07	C
ATOM 8555	C	GLY A 577	10.277	26.939	2.725	1.00	87.30	C
ATOM 8556	O	GLY A 577	11.075	25.988	2.639	1.00	88.11	O
ATOM 8557	N	GLU A 578	8.948	26.807	2.560	1.00	89.19	N
ATOM 8559	CA	GLU A 578	8.275	25.574	2.078	1.00	92.83	C
ATOM 8561	CB	GLU A 578	6.821	25.929	1.572	1.00	93.63	C
ATOM 8564	CG	GLU A 578	5.920	24.741	1.086	1.00	98.88	C
ATOM 8567	CD	GLU A 578	5.383	24.801	-0.403	1.00	100.15	C
ATOM 8568	OE1	GLU A 578	5.169	25.906	-0.965	1.00	100.10	O
ATOM 8569	OE2	GLU A 578	5.120	23.730	-1.024	1.00	100.27	O
ATOM 8570	C	GLU A 578	9.100	24.860	0.942	1.00	94.09	C
ATOM 8571	O	GLU A 578	9.703	25.548	0.100	1.00	92.98	O
ATOM 8572	N	ASN A 579	9.092	23.509	0.905	1.00	96.70	N
ATOM 8574	CA	ASN A 579	9.654	22.694	-0.210	1.00	97.87	C
ATOM 8576	CB	ASN A 579	8.673	22.664	-1.431	1.00	98.97	C
ATOM 8579	CG	ASN A 579	8.787	21.320	-2.343	1.00	103.58	C
ATOM 8580	OD1	ASN A 579	9.375	20.292	-1.934	1.00	107.20	O
ATOM 8581	ND2	ASN A 579	8.176	21.367	-3.567	1.00	102.91	N
ATOM 8584	C	ASN A 579	11.088	23.139	-0.599	1.00	95.88	C
ATOM 8585	O	ASN A 579	11.436	23.228	-1.761	1.00	95.66	O
ATOM 8586	N	ASN A 580	11.921	23.436	0.392	1.00	94.91	N
ATOM 8588	CA	ASN A 580	13.261	23.999	0.150	1.00	93.61	C
ATOM 8590	CB	ASN A 580	14.272	22.905	-0.271	1.00	96.16	C
ATOM 8593	CG	ASN A 580	15.723	23.230	0.188	1.00	96.15	C
ATOM 8594	OD1	ASN A 580	16.025	24.371	0.471	1.00	97.19	O
ATOM 8595	ND2	ASN A 580	16.599	22.237	0.248	1.00	96.25	N
ATOM 8598	C	ASN A 580	13.325	25.157	-0.873	1.00	91.65	C
ATOM 8599	O	ASN A 580	14.368	25.364	-1.497	1.00	91.22	O
ATOM 8600	N	THR A 581	12.220	25.893	-1.049	1.00	90.43	N
ATOM 8602	CA	THR A 581	12.204	27.090	-1.901	1.00	88.39	C
ATOM 8604	CB	THR A 581	10.888	27.209	-2.798	1.00	89.27	C
ATOM 8606	OG1	THR A 581	9.764	27.589	-1.994	1.00	89.04	O
ATOM 8608	CG2	THR A 581	10.466	25.857	-3.437	1.00	92.43	C
ATOM 8612	C	THR A 581	12.406	28.367	-1.034	1.00	84.96	C
ATOM 8613	O	THR A 581	11.544	28.728	-0.221	1.00	83.83	O

ATOM 8614	N	LEU	A	582	13.563	29.011	-1.223	1.00	82.72	N
ATOM 8616	CA	LEU	A	582	13.796	30.357	-0.742	1.00	79.94	C
ATOM 8618	CB	LEU	A	582	15.097	30.931	-1.288	1.00	79.24	C
ATOM 8621	CG	LEU	A	582	16.381	30.246	-0.893	1.00	80.18	C
ATOM 8623	CD1	LEU	A	582	17.569	31.154	-1.231	1.00	79.77	C
ATOM 8627	CD2	LEU	A	582	16.366	29.908	0.573	1.00	80.16	C
ATOM 8631	C	LEU	A	582	12.669	31.327	-1.083	1.00	78.75	C
ATOM 8632	O	LEU	A	582	11.920	31.175	-2.062	1.00	78.56	O
ATOM 8633	N	VAL	A	583	12.627	32.351	-0.238	1.00	77.04	N
ATOM 8635	CA	VAL	A	583	11.565	33.320	-0.172	1.00	76.73	C
ATOM 8637	CB	VAL	A	583	10.838	33.269	1.201	1.00	76.17	C
ATOM 8639	CG1	VAL	A	583	9.880	34.449	1.387	1.00	75.25	C
ATOM 8643	CG2	VAL	A	583	10.076	31.987	1.302	1.00	78.05	C
ATOM 8647	C	VAL	A	583	12.202	34.664	-0.367	1.00	75.52	C
ATOM 8648	O	VAL	A	583	13.122	35.011	0.368	1.00	74.49	O
ATOM 8649	N	TRP	A	584	11.705	35.404	-1.363	1.00	75.92	N
ATOM 8651	CA	TRP	A	584	12.152	36.769	-1.631	1.00	74.96	C
ATOM 8653	CB	TRP	A	584	12.784	36.822	-3.004	1.00	75.84	C
ATOM 8656	CG	TRP	A	584	13.929	35.915	-3.112	1.00	75.22	C
ATOM 8657	CD1	TRP	A	584	13.892	34.622	-3.468	1.00	73.95	C
ATOM 8659	NE1	TRP	A	584	15.156	34.097	-3.430	1.00	72.84	N
ATOM 8661	CE2	TRP	A	584	16.035	35.062	-3.034	1.00	72.12	C
ATOM 8662	CD2	TRP	A	584	15.298	36.220	-2.810	1.00	73.54	C
ATOM 8663	CE3	TRP	A	584	15.972	37.367	-2.379	1.00	73.41	C
ATOM 8665	CZ3	TRP	A	584	17.340	37.308	-2.209	1.00	74.46	C
ATOM 8667	CH2	TRP	A	584	18.035	36.127	-2.434	1.00	75.07	C
ATOM 8669	CZ2	TRP	A	584	17.397	35.002	-2.850	1.00	73.68	C
ATOM 8671	C	TRP	A	584	11.015	37.767	-1.589	1.00	74.89	C
ATOM 8672	O	TRP	A	584	9.889	37.450	-1.907	1.00	75.76	O
ATOM 8673	N	LYS	A	585	11.332	38.992	-1.213	1.00	74.03	N
ATOM 8675	CA	LYS	A	585	10.341	40.037	-1.097	1.00	73.90	C
ATOM 8677	CB	LYS	A	585	9.857	40.189	0.369	1.00	72.96	C
ATOM 8680	CG	LYS	A	585	8.762	39.160	0.785	1.00	72.93	C
ATOM 8683	CD	LYS	A	585	7.912	39.538	2.029	1.00	71.79	C
ATOM 8686	CE	LYS	A	585	6.856	38.458	2.403	1.00	72.28	C
ATOM 8689	NZ	LYS	A	585	6.373	38.409	3.829	1.00	71.42	N
ATOM 8693	C	LYS	A	585	10.947	41.305	-1.619	1.00	73.86	C
ATOM 8694	O	LYS	A	585	12.140	41.474	-1.545	1.00	71.84	O
ATOM 8695	N	TYR	A	586	10.104	42.174	-2.184	1.00	75.89	N
ATOM 8697	CA	TYR	A	586	10.490	43.531	-2.525	1.00	77.16	C
ATOM 8699	CB	TYR	A	586	10.230	43.846	-3.986	1.00	79.32	C
ATOM 8702	CG	TYR	A	586	8.763	43.925	-4.384	1.00	81.59	C
ATOM 8703	CD1	TYR	A	586	8.213	45.101	-4.860	1.00	82.49	C
ATOM 8705	CE1	TYR	A	586	6.859	45.174	-5.239	1.00	86.87	C
ATOM 8707	CZ	TYR	A	586	6.024	44.052	-5.144	1.00	87.16	C
ATOM 8708	OH	TYR	A	586	4.674	44.110	-5.515	1.00	87.71	O
ATOM 8710	CE2	TYR	A	586	6.560	42.871	-4.672	1.00	85.36	C
ATOM 8712	CD2	TYR	A	586	7.928	42.812	-4.287	1.00	82.83	C
ATOM 8714	C	TYR	A	586	9.748	44.512	-1.639	1.00	77.86	C
ATOM 8715	O	TYR	A	586	8.764	44.169	-0.970	1.00	76.82	O
ATOM 8716	N	ALA	A	587	10.264	45.735	-1.642	1.00	79.52	N
ATOM 8718	CA	ALA	A	587	9.624	46.881	-1.005	1.00	81.22	C
ATOM 8720	CB	ALA	A	587	10.664	47.718	-0.259	1.00	81.30	C
ATOM 8724	C	ALA	A	587	8.942	47.760	-2.040	1.00	83.87	C
ATOM 8725	O	ALA	A	587	9.587	48.225	-2.966	1.00	85.06	O
ATOM 8726	N	ASP	A	588	7.646	48.003	-1.873	1.00	85.42	N
ATOM 8728	CA	ASP	A	588	6.956	49.034	-2.638	1.00	87.97	C
ATOM 8730	CB	ASP	A	588	5.453	48.660	-2.823	1.00	89.10	C
ATOM 8733	CG	ASP	A	588	4.586	48.846	-1.562	1.00	88.49	C
ATOM 8734	OD1	ASP	A	588	4.972	49.551	-0.614	1.00	88.44	O
ATOM 8735	OD2	ASP	A	588	3.453	48.328	-1.455	1.00	88.07	O
ATOM 8736	C	ASP	A	588	7.209	50.472	-2.088	1.00	89.91	C
ATOM 8737	O	ASP	A	588	7.973	50.687	-1.122	1.00	88.35	O
ATOM 8738	N	ALA	A	589	6.571	51.439	-2.751	1.00	93.88	N
ATOM 8740	CA	ALA	A	589	6.641	52.881	-2.458	1.00	96.73	C
ATOM 8742	CB	ALA	A	589	5.728	53.626	-3.421	1.00	100.11	C
ATOM 8746	C	ALA	A	589	6.276	53.241	-1.005	1.00	96.86	C
ATOM 8747	O	ALA	A	589	6.805	54.223	-0.437	1.00	98.22	O

ATOM 8748	N	GLY	A	590	5.363	52.441	-0.433	1.00	95.88	N
ATOM 8750	CA	GLY	A	590	4.993	52.493	0.975	1.00	94.90	C
ATOM 8753	C	GLY	A	590	6.013	51.865	1.906	1.00	91.58	C
ATOM 8754	O	GLY	A	590	5.808	51.912	3.111	1.00	90.28	O
ATOM 8755	N	HIS	A	591	7.114	51.337	1.348	1.00	90.22	N
ATOM 8757	CA	HIS	A	591	8.120	50.545	2.075	1.00	87.77	C
ATOM 8759	CB	HIS	A	591	8.959	51.439	3.071	1.00	88.45	C
ATOM 8762	CG	HIS	A	591	9.793	52.510	2.391	1.00	95.05	C
ATOM 8763	ND1	HIS	A	591	9.493	53.860	2.461	1.00	103.48	N
ATOM 8765	CE1	HIS	A	591	10.363	54.550	1.732	1.00	106.24	C
ATOM 8767	NE2	HIS	A	591	11.225	53.702	1.194	1.00	104.71	N
ATOM 8769	CD2	HIS	A	591	10.895	52.423	1.597	1.00	98.92	C
ATOM 8771	C	HIS	A	591	7.502	49.249	2.733	1.00	84.53	C
ATOM 8772	O	HIS	A	591	7.962	48.785	3.794	1.00	82.29	O
ATOM 8773	N	VAL	A	592	6.486	48.675	2.075	1.00	83.76	N
ATOM 8775	CA	VAL	A	592	5.796	47.466	2.544	1.00	81.76	C
ATOM 8777	CB	VAL	A	592	4.215	47.621	2.498	1.00	83.71	C
ATOM 8779	CG1	VAL	A	592	3.457	46.343	2.905	1.00	81.70	C
ATOM 8783	CG2	VAL	A	592	3.769	48.747	3.396	1.00	85.59	C
ATOM 8787	C	VAL	A	592	6.300	46.291	1.683	1.00	80.26	C
ATOM 8788	O	VAL	A	592	6.623	46.478	0.512	1.00	80.92	O
ATOM 8789	N	CYS	A	593	6.362	45.087	2.259	1.00	77.78	N
ATOM 8791	CA	CYS	A	593	7.075	43.998	1.639	1.00	75.78	C
ATOM 8793	CB	CYS	A	593	7.847	43.219	2.689	1.00	74.24	C
ATOM 8796	SG	CYS	A	593	9.221	44.051	3.477	1.00	73.14	S
ATOM 8797	C	CYS	A	593	6.122	43.052	1.000	1.00	76.03	C
ATOM 8798	O	CYS	A	593	5.141	42.647	1.620	1.00	75.39	O
ATOM 8799	N	HIS	A	594	6.431	42.645	-0.221	1.00	76.34	N
ATOM 8801	CA	HIS	A	594	5.581	41.688	-0.899	1.00	78.01	C
ATOM 8803	CB	HIS	A	594	4.684	42.369	-1.960	1.00	80.52	C
ATOM 8806	CG	HIS	A	594	3.723	43.390	-1.407	1.00	81.95	C
ATOM 8807	ND1	HIS	A	594	2.483	43.052	-0.907	1.00	83.85	N
ATOM 8809	CE1	HIS	A	594	1.864	44.144	-0.490	1.00	84.93	C
ATOM 8811	NE2	HIS	A	594	2.657	45.179	-0.700	1.00	84.02	N
ATOM 8813	CD2	HIS	A	594	3.827	44.736	-1.271	1.00	81.36	C
ATOM 8815	C	HIS	A	594	6.429	40.639	-1.555	1.00	77.43	C
ATOM 8816	O	HIS	A	594	7.563	40.878	-1.901	1.00	76.36	O
ATOM 8817	N	LEU	A	595	5.821	39.480	-1.748	1.00	78.64	N
ATOM 8819	CA	LEU	A	595	6.443	38.324	-2.362	1.00	78.53	C
ATOM 8821	CB	LEU	A	595	5.448	37.149	-2.299	1.00	79.33	C
ATOM 8824	CG	LEU	A	595	5.801	35.797	-1.684	1.00	78.71	C
ATOM 8826	CD1	LEU	A	595	6.898	35.909	-0.658	1.00	76.77	C
ATOM 8830	CD2	LEU	A	595	4.553	35.115	-1.075	1.00	80.22	C
ATOM 8834	C	LEU	A	595	6.829	38.606	-3.822	1.00	80.06	C
ATOM 8835	O	LEU	A	595	6.092	39.243	-4.551	1.00	81.01	O
ATOM 8836	N	CYS	A	596	7.989	38.116	-4.238	1.00	80.39	N
ATOM 8838	CA	CYS	A	596	8.402	38.165	-5.626	1.00	82.14	C
ATOM 8840	CB	CYS	A	596	9.907	37.993	-5.745	1.00	81.09	C
ATOM 8843	SG	CYS	A	596	10.896	39.338	-5.042	1.00	82.20	S
ATOM 8844	C	CYS	A	596	7.750	37.016	-6.381	1.00	84.23	C
ATOM 8845	O	CYS	A	596	7.182	36.099	-5.758	1.00	84.81	O
ATOM 8846	N	HIS	A	597	7.839	37.077	-7.726	1.00	85.98	N
ATOM 8848	CA	HIS	A	597	7.387	35.991	-8.602	1.00	86.82	C
ATOM 8850	CB	HIS	A	597	7.815	36.182	-10.084	1.00	88.03	C
ATOM 8853	CG	HIS	A	597	6.992	35.395	-11.096	1.00	91.55	C
ATOM 8854	ND1	HIS	A	597	5.695	34.962	-10.863	1.00	94.55	N
ATOM 8856	CE1	HIS	A	597	5.231	34.335	-11.930	1.00	94.09	C
ATOM 8858	NE2	HIS	A	597	6.176	34.338	-12.851	1.00	94.23	N
ATOM 8860	CD2	HIS	A	597	7.278	35.008	-12.366	1.00	92.74	C
ATOM 8862	C	HIS	A	597	8.102	34.818	-8.053	1.00	85.24	C
ATOM 8863	O	HIS	A	597	9.227	34.973	-7.601	1.00	82.66	O
ATOM 8864	N	PRO	A	598	7.470	33.649	-8.079	1.00	86.55	N
ATOM 8865	CA	PRO	A	598	8.206	32.453	-7.664	1.00	86.49	C
ATOM 8867	CB	PRO	A	598	7.109	31.362	-7.590	1.00	88.23	C
ATOM 8870	CG	PRO	A	598	5.750	32.113	-7.680	1.00	88.45	C
ATOM 8873	CD	PRO	A	598	6.076	33.330	-8.490	1.00	87.86	C
ATOM 8876	C	PRO	A	598	9.361	32.186	-8.678	1.00	86.52	C
ATOM 8877	O	PRO	A	598	10.423	31.664	-8.294	1.00	85.89	O

ATOM 8878	N	ASN	A	599	9.205	32.641	-9.925	1.00	87.20	N
ATOM 8880	CA	ASN	A	599	10.270	32.471	-10.943	1.00	87.60	C
ATOM 8882	CB	ASN	A	599	9.669	32.588	-12.365	1.00	88.64	C
ATOM 8885	CG	ASN	A	599	9.382	31.218	-13.006	1.00	90.07	C
ATOM 8886	OD1	ASN	A	599	9.676	31.000	-14.178	1.00	92.33	O
ATOM 8887	ND2	ASN	A	599	8.799	30.307	-12.241	1.00	88.59	N
ATOM 8890	C	ASN	A	599	11.524	33.388	-10.788	1.00	86.52	C
ATOM 8891	O	ASN	A	599	12.405	33.364	-11.639	1.00	87.32	O
ATOM 8892	N	CYS	A	600	11.599	34.182	-9.712	1.00	84.92	N
ATOM 8894	CA	CYS	A	600	12.739	35.071	-9.439	1.00	83.58	C
ATOM 8896	CB	CYS	A	600	12.275	36.331	-8.714	1.00	83.07	C
ATOM 8899	SG	CYS	A	600	11.574	37.524	-9.848	1.00	86.34	S
ATOM 8900	C	CYS	A	600	13.757	34.368	-8.590	1.00	82.06	C
ATOM 8901	O	CYS	A	600	13.838	34.583	-7.390	1.00	80.61	O
ATOM 8902	N	THR	A	601	14.543	33.532	-9.240	1.00	82.20	N
ATOM 8904	CA	THR	A	601	15.540	32.732	-8.580	1.00	81.19	C
ATOM 8906	CB	THR	A	601	16.394	31.985	-9.643	1.00	82.55	C
ATOM 8908	OG1	THR	A	601	15.581	31.098	-10.403	1.00	81.59	O
ATOM 8910	CG2	THR	A	601	17.362	31.047	-8.992	1.00	82.82	C
ATOM 8914	C	THR	A	601	16.462	33.557	-7.683	1.00	80.12	C
ATOM 8915	O	THR	A	601	17.064	32.984	-6.775	1.00	80.18	O
ATOM 8916	N	TYR	A	602	16.626	34.861	-7.927	1.00	79.32	N
ATOM 8918	CA	TYR	A	602	17.704	35.596	-7.243	1.00	78.82	C
ATOM 8920	CB	TYR	A	602	18.764	35.995	-8.249	1.00	80.35	C
ATOM 8923	CG	TYR	A	602	19.511	34.824	-8.832	1.00	81.46	C
ATOM 8924	CD1	TYR	A	602	19.213	34.362	-10.117	1.00	80.69	C
ATOM 8926	CE1	TYR	A	602	19.887	33.321	-10.666	1.00	81.66	C
ATOM 8928	CZ	TYR	A	602	20.870	32.693	-9.952	1.00	82.09	C
ATOM 8929	OH	TYR	A	602	21.510	31.618	-10.515	1.00	83.96	O
ATOM 8931	CE2	TYR	A	602	21.197	33.123	-8.653	1.00	82.70	C
ATOM 8933	CD2	TYR	A	602	20.518	34.187	-8.110	1.00	80.31	C
ATOM 8935	C	TYR	A	602	17.314	36.830	-6.455	1.00	77.63	C
ATOM 8936	O	TYR	A	602	18.181	37.605	-6.070	1.00	76.60	O
ATOM 8937	N	GLY	A	603	16.021	36.994	-6.190	1.00	77.48	N
ATOM 8939	CA	GLY	A	603	15.508	38.166	-5.496	1.00	76.91	C
ATOM 8942	C	GLY	A	603	15.009	39.185	-6.473	1.00	77.91	C
ATOM 8943	O	GLY	A	603	15.253	39.045	-7.663	1.00	78.71	O
ATOM 8944	N	CYS	A	604	14.312	40.206	-5.982	1.00	78.21	N
ATOM 8946	CA	CYS	A	604	13.738	41.210	-6.882	1.00	79.72	C
ATOM 8948	CB	CYS	A	604	12.414	40.701	-7.464	1.00	80.28	C
ATOM 8951	SG	CYS	A	604	10.973	40.882	-6.410	1.00	81.56	S
ATOM 8952	C	CYS	A	604	13.558	42.674	-6.440	1.00	80.19	C
ATOM 8953	O	CYS	A	604	13.418	43.047	-5.273	1.00	77.79	O
ATOM 8954	N	THR	A	605	13.512	43.461	-7.504	1.00	83.00	N
ATOM 8956	CA	THR	A	605	13.431	44.905	-7.548	1.00	84.81	C
ATOM 8958	CB	THR	A	605	14.006	45.292	-8.941	1.00	87.10	C
ATOM 8960	OG1	THR	A	605	15.372	45.651	-8.743	1.00	89.61	O
ATOM 8962	CG2	THR	A	605	13.337	46.510	-9.660	1.00	90.11	C
ATOM 8966	C	THR	A	605	11.986	45.326	-7.333	1.00	85.27	C
ATOM 8967	O	THR	A	605	11.718	46.227	-6.541	1.00	85.22	O
ATOM 8968	N	GLY	A	606	11.069	44.625	-7.999	1.00	85.73	N
ATOM 8970	CA	GLY	A	606	9.649	44.898	-7.928	1.00	86.94	C
ATOM 8973	C	GLY	A	606	8.783	43.657	-8.124	1.00	86.94	C
ATOM 8974	O	GLY	A	606	9.223	42.537	-7.925	1.00	85.56	O
ATOM 8975	N	PRO	A	607	7.534	43.854	-8.515	1.00	89.16	N
ATOM 8976	CA	PRO	A	607	6.552	42.772	-8.584	1.00	89.64	C
ATOM 8978	CB	PRO	A	607	5.207	43.521	-8.508	1.00	91.72	C
ATOM 8981	CG	PRO	A	607	5.467	44.862	-9.127	1.00	93.44	C
ATOM 8984	CD	PRO	A	607	6.939	45.149	-8.880	1.00	92.13	C
ATOM 8987	C	PRO	A	607	6.562	41.858	-9.835	1.00	90.94	C
ATOM 8988	O	PRO	A	607	6.927	42.251	-10.964	1.00	91.02	O
ATOM 8989	N	GLY	A	608	6.123	40.616	-9.558	1.00	91.39	N
ATOM 8991	CA	GLY	A	608	5.924	39.533	-10.509	1.00	92.22	C
ATOM 8994	C	GLY	A	608	6.989	39.311	-11.589	1.00	92.72	C
ATOM 8995	O	GLY	A	608	8.175	39.081	-11.362	1.00	91.98	O
ATOM 8996	N	LEU	A	609	6.506	39.353	-12.807	1.00	94.71	N
ATOM 8998	CA	LEU	A	609	7.270	39.067	-14.030	1.00	95.05	C
ATOM 9000	CB	LEU	A	609	6.311	39.435	-15.240	1.00	97.40	C



ATOM	9003	CG	LEU	A	609	4.763	39.599	-14.971	1.00	97.53	C
ATOM	9005	CD1	LEU	A	609	4.034	40.291	-16.098	1.00	99.87	C
ATOM	9009	CD2	LEU	A	609	4.038	38.239	-14.601	1.00	96.75	C
ATOM	9013	C	LEU	A	609	8.667	39.823	-14.097	1.00	94.70	C
ATOM	9014	O	LEU	A	609	9.722	39.184	-14.227	1.00	92.65	O
ATOM	9015	N	ALA	A	610	8.610	41.172	-13.954	1.00	96.08	N
ATOM	9017	CA	ALA	A	610	9.684	42.152	-14.257	1.00	96.49	C
ATOM	9019	CB	ALA	A	610	9.147	43.190	-15.238	1.00	98.58	C
ATOM	9023	C	ALA	A	610	10.302	42.887	-13.030	1.00	95.94	C
ATOM	9024	O	ALA	A	610	10.840	43.987	-13.157	1.00	97.11	O
ATOM	9025	N	GLY	A	611	10.220	42.304	-11.844	1.00	94.30	N
ATOM	9027	CA	GLY	A	611	11.240	42.583	-10.848	1.00	93.78	C
ATOM	9030	C	GLY	A	611	12.516	41.826	-11.256	1.00	94.52	C
ATOM	9031	O	GLY	A	611	13.637	42.114	-10.819	1.00	93.76	O
ATOM	9032	N	CYS	A	612	12.314	40.804	-12.087	1.00	96.55	N
ATOM	9034	CA	CYS	A	612	13.377	40.054	-12.743	1.00	97.90	C
ATOM	9036	CB	CYS	A	612	12.937	38.613	-12.854	1.00	96.30	C
ATOM	9039	SG	CYS	A	612	13.031	37.903	-11.240	1.00	90.82	S
ATOM	9040	C	CYS	A	612	13.582	40.653	-14.140	1.00	103.59	C
ATOM	9041	O	CYS	A	612	12.645	40.648	-14.971	1.00	103.99	O
ATOM	9042	N	PRO	A	613	14.763	41.243	-14.370	1.00	108.80	N
ATOM	9043	CA	PRO	A	613	15.182	41.615	-15.726	1.00	114.87	C
ATOM	9045	CB	PRO	A	613	15.737	43.030	-15.521	1.00	114.53	C
ATOM	9048	CG	PRO	A	613	16.295	42.984	-14.088	1.00	110.83	C
ATOM	9051	CD	PRO	A	613	15.772	41.685	-13.378	1.00	107.45	C
ATOM	9054	C	PRO	A	613	16.262	40.618	-16.273	1.00	122.10	C
ATOM	9055	O	PRO	A	613	16.937	39.895	-15.470	1.00	120.24	O
ATOM	9056	N	THR	A	614	16.391	40.617	-17.621	1.00	47.89	N
ATOM	9058	CA	THR	A	614	17.198	39.690	-18.467	1.00	53.92	C
ATOM	9060	CB	THR	A	614	18.247	38.823	-17.659	1.00	55.51	C
ATOM	9062	OG1	THR	A	614	19.340	39.668	-17.217	1.00	58.77	O
ATOM	9064	CG2	THR	A	614	18.907	37.587	-18.539	1.00	57.00	C
ATOM	9068	C	THR	A	614	16.172	38.798	-19.222	1.00	56.93	C
ATOM	9069	O	THR	A	614	15.663	39.166	-20.337	1.00	59.17	O
ATOM	9070	OXT	THR	A	614	15.847	37.720	-18.669	1.00	59.96	O
ATOM	9071	N	ASP	C	1	33.389	65.342	66.616	1.00	67.77	N
ATOM	9073	CA	ASP	C	1	33.591	64.060	67.391	1.00	63.04	C
ATOM	9075	CB	ASP	C	1	34.960	64.034	68.124	1.00	62.38	C
ATOM	9078	CG	ASP	C	1	36.160	63.729	67.215	1.00	63.30	C
ATOM	9079	OD1	ASP	C	1	36.329	62.559	66.749	1.00	62.63	O
ATOM	9080	OD2	ASP	C	1	37.047	64.606	67.012	1.00	67.29	O
ATOM	9081	C	ASP	C	1	32.479	63.876	68.450	1.00	60.60	C
ATOM	9082	O	ASP	C	1	31.963	64.812	68.966	1.00	63.19	O
ATOM	9085	N	ILE	C	2	32.190	62.647	68.811	1.00	56.23	N
ATOM	9087	CA	ILE	C	2	31.119	62.338	69.720	1.00	54.21	C
ATOM	9089	CB	ILE	C	2	30.653	60.829	69.431	1.00	51.58	C
ATOM	9091	CG1	ILE	C	2	29.523	60.345	70.377	1.00	50.81	C
ATOM	9094	CD1	ILE	C	2	28.466	59.526	69.644	1.00	49.41	C
ATOM	9098	CG2	ILE	C	2	31.758	59.838	69.497	1.00	46.09	C
ATOM	9102	C	ILE	C	2	31.538	62.546	71.167	1.00	52.71	C
ATOM	9103	O	ILE	C	2	32.470	61.928	71.639	1.00	50.84	O
ATOM	9104	N	LEU	C	3	30.821	63.383	71.886	1.00	54.32	N
ATOM	9106	CA	LEU	C	3	31.006	63.509	73.329	1.00	53.38	C
ATOM	9108	CB	LEU	C	3	30.547	64.886	73.785	1.00	57.50	C
ATOM	9111	CG	LEU	C	3	31.316	66.005	73.123	1.00	61.79	C
ATOM	9113	CD1	LEU	C	3	31.128	67.318	73.861	1.00	66.05	C
ATOM	9117	CD2	LEU	C	3	32.806	65.586	73.107	1.00	61.67	C
ATOM	9121	C	LEU	C	3	30.206	62.515	74.091	1.00	50.57	C
ATOM	9122	O	LEU	C	3	29.205	62.077	73.632	1.00	50.19	O
ATOM	9123	N	LEU	C	4	30.655	62.200	75.294	1.00	49.48	N
ATOM	9125	CA	LEU	C	4	29.977	61.272	76.210	1.00	47.62	C
ATOM	9127	CB	LEU	C	4	30.661	59.899	76.270	1.00	44.26	C
ATOM	9130	CG	LEU	C	4	30.556	58.903	75.095	1.00	42.54	C
ATOM	9132	CD1	LEU	C	4	31.192	57.536	75.461	1.00	42.27	C
ATOM	9136	CD2	LEU	C	4	29.161	58.642	74.668	1.00	41.09	C
ATOM	9140	C	LEU	C	4	30.102	61.939	77.564	1.00	49.23	C
ATOM	9141	O	LEU	C	4	31.203	62.184	78.046	1.00	50.89	O
ATOM	9142	N	THR	C	5	28.982	62.206	78.193	1.00	50.08	N

ATOM	9144	CA	THR	C	5	28.925	63.052	79.340	1.00	51.09	C
ATOM	9146	CB	THR	C	5	28.023	64.197	78.914	1.00	54.47	C
ATOM	9148	OG1	THR	C	5	28.669	64.889	77.847	1.00	54.99	O
ATOM	9150	CG2	THR	C	5	27.841	65.257	80.010	1.00	58.10	C
ATOM	9154	C	THR	C	5	28.318	62.222	80.455	1.00	50.26	C
ATOM	9155	O	THR	C	5	27.173	61.791	80.329	1.00	52.74	O
ATOM	9156	N	GLN	C	6	29.054	61.916	81.509	1.00	48.92	N
ATOM	9158	CA	GLN	C	6	28.477	61.131	82.612	1.00	48.41	C
ATOM	9160	CB	GLN	C	6	29.420	60.029	83.106	1.00	46.13	C
ATOM	9163	CG	GLN	C	6	29.841	58.951	82.032	1.00	46.01	C
ATOM	9166	CD	GLN	C	6	30.748	57.811	82.605	1.00	42.83	C
ATOM	9167	OE1	GLN	C	6	30.341	57.108	83.506	1.00	43.11	O
ATOM	9168	NE2	GLN	C	6	31.931	57.649	82.063	1.00	39.15	N
ATOM	9171	C	GLN	C	6	28.086	62.057	83.776	1.00	51.15	C
ATOM	9172	O	GLN	C	6	28.575	63.185	83.915	1.00	51.19	O
ATOM	9173	N	SER	C	7	27.195	61.530	84.618	1.00	52.05	N
ATOM	9175	CA	SER	C	7	26.399	62.344	85.524	1.00	55.11	C
ATOM	9177	CB	SER	C	7	25.240	62.929	84.689	1.00	57.59	C
ATOM	9180	OG	SER	C	7	25.571	64.267	84.306	1.00	63.19	O
ATOM	9182	C	SER	C	7	25.843	61.474	86.652	1.00	54.25	C
ATOM	9183	O	SER	C	7	25.344	60.419	86.357	1.00	53.75	O
ATOM	9184	N	PRO	C	8	25.896	61.871	87.925	1.00	55.03	N
ATOM	9185	CA	PRO	C	8	26.657	63.025	88.411	1.00	56.11	C
ATOM	9187	CB	PRO	C	8	26.204	63.135	89.865	1.00	57.98	C
ATOM	9190	CG	PRO	C	8	25.667	61.770	90.233	1.00	56.40	C
ATOM	9193	CD	PRO	C	8	25.101	61.220	88.994	1.00	55.40	C
ATOM	9196	C	PRO	C	8	28.134	62.756	88.412	1.00	54.47	C
ATOM	9197	O	PRO	C	8	28.565	61.631	88.075	1.00	52.22	O
ATOM	9198	N	VAL	C	9	28.908	63.726	88.859	1.00	55.53	N
ATOM	9200	CA	VAL	C	9	30.311	63.456	89.017	1.00	55.24	C
ATOM	9202	CB	VAL	C	9	31.120	64.738	89.253	1.00	58.63	C
ATOM	9204	CG1	VAL	C	9	32.588	64.416	89.781	1.00	58.03	C
ATOM	9208	CG2	VAL	C	9	31.166	65.580	87.925	1.00	60.37	C
ATOM	9212	C	VAL	C	9	30.574	62.469	90.150	1.00	54.36	C
ATOM	9213	O	VAL	C	9	31.400	61.558	89.968	1.00	53.35	O
ATOM	9214	N	ILE	C	10	29.927	62.686	91.302	1.00	55.71	N
ATOM	9216	CA	ILE	C	10	29.879	61.722	92.418	1.00	55.79	C
ATOM	9218	CB	ILE	C	10	30.485	62.359	93.690	1.00	57.92	C
ATOM	9220	CG1	ILE	C	10	32.000	62.430	93.602	1.00	59.27	C
ATOM	9223	CD1	ILE	C	10	32.638	63.164	94.791	1.00	62.22	C
ATOM	9227	CG2	ILE	C	10	30.200	61.541	94.922	1.00	58.67	C
ATOM	9231	C	ILE	C	10	28.393	61.258	92.677	1.00	57.07	C
ATOM	9232	O	ILE	C	10	27.464	62.062	92.664	1.00	60.01	O
ATOM	9233	N	LEU	C	11	28.137	59.983	92.929	1.00	55.55	N
ATOM	9235	CA	LEU	C	11	26.769	59.588	93.190	1.00	56.88	C
ATOM	9237	CB	LEU	C	11	26.419	58.508	92.202	1.00	54.80	C
ATOM	9240	CG	LEU	C	11	25.025	57.907	92.195	1.00	55.67	C
ATOM	9242	CD1	LEU	C	11	24.004	58.957	92.115	1.00	58.93	C
ATOM	9246	CD2	LEU	C	11	24.914	56.991	90.986	1.00	54.73	C
ATOM	9250	C	LEU	C	11	26.688	59.068	94.620	1.00	59.06	C
ATOM	9251	O	LEU	C	11	27.287	58.041	94.901	1.00	59.11	O
ATOM	9252	N	SER	C	12	26.023	59.782	95.533	1.00	61.71	N
ATOM	9254	CA	SER	C	12	26.005	59.382	96.956	1.00	63.27	C
ATOM	9256	CB	SER	C	12	26.214	60.556	97.941	1.00	65.33	C
ATOM	9259	OG	SER	C	12	27.431	61.153	97.699	1.00	63.03	O
ATOM	9261	C	SER	C	12	24.681	58.744	97.285	1.00	64.64	C
ATOM	9262	O	SER	C	12	23.656	59.375	97.191	1.00	66.78	O
ATOM	9263	N	VAL	C	13	24.750	57.540	97.814	1.00	64.40	N
ATOM	9265	CA	VAL	C	13	23.657	56.618	97.810	1.00	65.81	C
ATOM	9267	CB	VAL	C	13	23.891	55.757	96.586	1.00	63.63	C
ATOM	9269	CG1	VAL	C	13	23.223	54.454	96.715	1.00	66.53	C
ATOM	9273	CG2	VAL	C	13	23.399	56.484	95.355	1.00	64.60	C
ATOM	9277	C	VAL	C	13	23.712	55.741	99.037	1.00	66.60	C
ATOM	9278	O	VAL	C	13	24.785	55.268	99.380	1.00	64.51	O
ATOM	9279	N	SER	C	14	22.579	55.475	99.680	1.00	69.64	N
ATOM	9281	CA	SER	C	14	22.601	54.560	100.836	1.00	72.09	C
ATOM	9283	CB	SER	C	14	21.478	54.804	101.839	1.00	76.76	C
ATOM	9286	OG	SER	C	14	20.810	56.030	101.609	1.00	79.16	O

ATOM	9288	C	SER	C	14	22.599	53.119	100.356	1.00	70.71	C
ATOM	9289	O	SER	C	14	22.149	52.842	99.275	1.00	68.37	O
ATOM	9290	N	PRO	C	15	23.152	52.211	101.149	1.00	72.08	N
ATOM	9291	CA	PRO	C	15	23.353	50.835	100.735	1.00	71.76	C
ATOM	9293	CB	PRO	C	15	24.297	50.294	101.808	1.00	73.08	C
ATOM	9296	CG	PRO	C	15	23.978	51.010	102.986	1.00	76.10	C
ATOM	9299	CD	PRO	C	15	23.611	52.399	102.530	1.00	74.92	C
ATOM	9302	C	PRO	C	15	22.056	50.082	100.765	1.00	75.00	C
ATOM	9303	O	PRO	C	15	21.340	50.172	101.721	1.00	79.23	O
ATOM	9304	N	GLY	C	16	21.755	49.355	99.712	1.00	74.43	N
ATOM	9306	CA	GLY	C	16	20.459	48.743	99.583	1.00	77.95	C
ATOM	9309	C	GLY	C	16	19.586	49.408	98.540	1.00	77.45	C
ATOM	9310	O	GLY	C	16	18.688	48.741	98.034	1.00	80.57	O
ATOM	9311	N	GLU	C	17	19.809	50.673	98.194	1.00	75.10	N
ATOM	9313	CA	GLU	C	17	18.992	51.329	97.158	1.00	74.75	C
ATOM	9315	CB	GLU	C	17	19.245	52.794	97.143	1.00	73.81	C
ATOM	9318	CG	GLU	C	17	18.823	53.497	98.389	1.00	79.22	C
ATOM	9321	CD	GLU	C	17	18.808	54.995	98.145	1.00	79.79	C
ATOM	9322	OE1	GLU	C	17	19.851	55.616	97.710	1.00	69.50	O
ATOM	9323	OE2	GLU	C	17	17.681	55.505	98.369	1.00	88.18	O
ATOM	9324	C	GLU	C	17	19.231	50.930	95.713	1.00	71.55	C
ATOM	9325	O	GLU	C	17	20.338	50.462	95.351	1.00	66.99	O
ATOM	9326	N	ALA	C	18	18.177	51.167	94.895	1.00	72.93	N
ATOM	9328	CA	ALA	C	18	18.342	51.297	93.452	1.00	69.72	C
ATOM	9330	CB	ALA	C	18	17.040	51.182	92.640	1.00	70.80	C
ATOM	9334	C	ALA	C	18	19.087	52.642	93.212	1.00	67.33	C
ATOM	9335	O	ALA	C	18	18.731	53.667	93.755	1.00	69.28	O
ATOM	9336	N	VAL	C	19	20.151	52.542	92.424	1.00	63.49	N
ATOM	9338	CA	VAL	C	19	21.005	53.594	91.948	1.00	61.76	C
ATOM	9340	CB	VAL	C	19	22.441	53.202	92.367	1.00	59.76	C
ATOM	9342	CG1	VAL	C	19	23.474	54.131	91.797	1.00	57.51	C
ATOM	9346	CG2	VAL	C	19	22.521	53.203	93.815	1.00	62.73	C
ATOM	9350	C	VAL	C	19	21.059	53.596	90.416	1.00	59.34	C
ATOM	9351	O	VAL	C	19	21.188	52.538	89.832	1.00	59.40	O
ATOM	9352	N	SER	C	20	21.053	54.764	89.776	1.00	57.96	N
ATOM	9354	CA	SER	C	20	21.205	54.860	88.333	1.00	55.03	C
ATOM	9356	CB	SER	C	20	20.027	55.545	87.683	1.00	57.01	C
ATOM	9359	OG	SER	C	20	18.851	54.897	88.037	1.00	61.60	O
ATOM	9361	C	SER	C	20	22.298	55.767	88.035	1.00	53.24	C
ATOM	9362	O	SER	C	20	22.254	56.879	88.497	1.00	54.65	O
ATOM	9363	N	PHE	C	21	23.257	55.326	87.212	1.00	50.84	N
ATOM	9365	CA	PHE	C	21	24.247	56.198	86.595	1.00	48.38	C
ATOM	9367	CB	PHE	C	21	25.592	55.519	86.453	1.00	46.09	C
ATOM	9370	CG	PHE	C	21	26.047	54.812	87.647	1.00	47.07	C
ATOM	9371	CD1	PHE	C	21	25.631	53.517	87.880	1.00	50.09	C
ATOM	9373	CE1	PHE	C	21	26.041	52.843	88.956	1.00	50.03	C
ATOM	9375	CZ	PHE	C	21	26.878	53.444	89.804	1.00	52.96	C
ATOM	9377	CE2	PHE	C	21	27.326	54.751	89.576	1.00	52.36	C
ATOM	9379	CD2	PHE	C	21	26.921	55.399	88.494	1.00	49.70	C
ATOM	9381	C	PHE	C	21	23.797	56.492	85.203	1.00	47.89	C
ATOM	9382	O	PHE	C	21	23.140	55.681	84.629	1.00	47.93	O
ATOM	9383	N	SER	C	22	24.198	57.626	84.646	1.00	48.25	N
ATOM	9385	CA	SER	C	22	23.802	58.025	83.317	1.00	49.61	C
ATOM	9387	CB	SER	C	22	22.694	59.023	83.416	1.00	53.37	C
ATOM	9390	OG	SER	C	22	23.123	59.992	84.294	1.00	55.34	O
ATOM	9392	C	SER	C	22	24.848	58.684	82.473	1.00	49.38	C
ATOM	9393	O	SER	C	22	25.692	59.451	82.980	1.00	51.10	O
ATOM	9394	N	CYS	C	23	24.693	58.465	81.165	1.00	49.64	N
ATOM	9396	CA	CYS	C	23	25.639	58.792	80.105	1.00	49.37	C
ATOM	9398	CB	CYS	C	23	26.354	57.470	79.749	1.00	47.09	C
ATOM	9401	SG	CYS	C	23	27.565	57.489	78.438	1.00	48.27	S
ATOM	9402	C	CYS	C	23	24.845	59.312	78.891	1.00	51.54	C
ATOM	9403	O	CYS	C	23	23.923	58.637	78.433	1.00	51.51	O
ATOM	9404	N	ARG	C	24	25.162	60.511	78.383	1.00	53.04	N
ATOM	9406	CA	ARG	C	24	24.403	61.116	77.240	1.00	54.66	C
ATOM	9408	CB	ARG	C	24	23.681	62.434	77.585	1.00	56.60	C
ATOM	9417	C	ARG	C	24	25.410	61.393	76.163	1.00	53.77	C
ATOM	9418	O	ARG	C	24	26.331	62.193	76.410	1.00	55.68	O

ATOM	9419	N	ALA	C	25	25.276	60.747	75.000	1.00	51.76	N
ATOM	9421	CA	ALA	C	25	26.118	61.042	73.835	1.00	50.58	C
ATOM	9423	CB	ALA	C	25	26.241	59.816	72.982	1.00	48.78	C
ATOM	9427	C	ALA	C	25	25.591	62.193	73.012	1.00	53.60	C
ATOM	9428	O	ALA	C	25	24.412	62.317	72.863	1.00	56.32	O
ATOM	9429	N	SER	C	26	26.483	63.018	72.497	1.00	54.27	N
ATOM	9431	CA	SER	C	26	26.146	64.197	71.725	1.00	59.13	C
ATOM	9433	CB	SER	C	26	27.425	64.981	71.463	1.00	59.86	C
ATOM	9436	OG	SER	C	26	28.278	64.302	70.552	1.00	59.91	O
ATOM	9438	C	SER	C	26	25.446	63.922	70.377	1.00	61.50	C
ATOM	9439	O	SER	C	26	24.883	64.864	69.768	1.00	66.20	O
ATOM	9440	N	GLN	C	27	25.529	62.670	69.901	1.00	58.24	N
ATOM	9442	CA	GLN	C	27	24.827	62.225	68.706	1.00	60.10	C
ATOM	9444	CB	GLN	C	27	25.688	62.296	67.470	1.00	59.83	C
ATOM	9447	CG	GLN	C	27	27.081	62.008	67.716	1.00	58.23	C
ATOM	9450	CD	GLN	C	27	27.918	61.992	66.456	1.00	60.02	C
ATOM	9451	OE1	GLN	C	27	28.552	62.988	66.171	1.00	62.47	O
ATOM	9452	NE2	GLN	C	27	27.924	60.869	65.701	1.00	58.88	N
ATOM	9455	C	GLN	C	27	24.312	60.827	68.888	1.00	57.93	C
ATOM	9456	O	GLN	C	27	24.902	60.058	69.598	1.00	53.57	O
ATOM	9457	N	SER	C	28	23.165	60.527	68.271	1.00	61.55	N
ATOM	9459	CA	SER	C	28	22.408	59.316	68.582	1.00	60.90	C
ATOM	9461	CB	SER	C	28	20.945	59.423	68.203	1.00	65.18	C
ATOM	9464	OG	SER	C	28	20.591	58.143	67.697	1.00	66.79	O
ATOM	9466	C	SER	C	28	23.004	58.084	67.889	1.00	58.36	C
ATOM	9467	O	SER	C	28	23.256	58.074	66.663	1.00	60.09	O
ATOM	9468	N	ILE	C	29	23.131	57.029	68.691	1.00	54.91	N
ATOM	9470	CA	ILE	C	29	24.081	55.941	68.499	1.00	50.73	C
ATOM	9472	CB	ILE	C	29	24.939	56.025	69.690	1.00	48.76	C
ATOM	9474	CG1	ILE	C	29	26.204	56.799	69.506	1.00	47.90	C
ATOM	9477	CD1	ILE	C	29	26.781	56.887	71.020	1.00	46.20	C
ATOM	9481	CG2	ILE	C	29	25.406	54.716	70.140	1.00	50.42	C
ATOM	9485	C	ILE	C	29	23.419	54.538	68.588	1.00	48.53	C
ATOM	9486	O	ILE	C	29	24.082	53.548	68.607	1.00	45.78	O
ATOM	9487	N	GLY	C	30	22.128	54.442	68.772	1.00	50.20	N
ATOM	9489	CA	GLY	C	30	21.526	53.158	68.932	1.00	49.68	C
ATOM	9492	C	GLY	C	30	21.768	52.584	70.304	1.00	48.73	C
ATOM	9493	O	GLY	C	30	21.368	53.115	71.357	1.00	48.59	O
ATOM	9494	N	THR	C	31	22.462	51.467	70.275	1.00	47.96	N
ATOM	9496	CA	THR	C	31	22.650	50.599	71.412	1.00	47.77	C
ATOM	9498	CB	THR	C	31	22.033	49.252	71.008	1.00	50.14	C
ATOM	9500	OG1	THR	C	31	20.656	49.459	70.720	1.00	56.14	O
ATOM	9502	CG2	THR	C	31	21.894	48.337	72.170	1.00	52.95	C
ATOM	9506	C	THR	C	31	24.137	50.455	71.595	1.00	44.48	C
ATOM	9507	O	THR	C	31	24.637	49.717	72.445	1.00	42.22	O
ATOM	9508	N	ASN	C	32	24.885	51.149	70.758	1.00	43.47	N
ATOM	9510	CA	ASN	C	32	26.288	50.870	70.721	1.00	41.11	C
ATOM	9512	CB	ASN	C	32	26.825	51.306	69.381	1.00	41.94	C
ATOM	9515	CG	ASN	C	32	26.386	50.392	68.282	1.00	43.35	C
ATOM	9516	OD1	ASN	C	32	26.176	49.129	68.474	1.00	38.32	O
ATOM	9517	ND2	ASN	C	32	26.245	51.004	67.090	1.00	43.19	N
ATOM	9520	C	ASN	C	32	27.059	51.545	71.863	1.00	39.52	C
ATOM	9521	O	ASN	C	32	27.910	52.433	71.610	1.00	37.18	O
ATOM	9522	N	ILE	C	33	26.740	51.112	73.093	1.00	39.04	N
ATOM	9524	CA	ILE	C	33	27.444	51.546	74.289	1.00	38.42	C
ATOM	9526	CB	ILE	C	33	26.556	52.547	75.003	1.00	40.72	C
ATOM	9528	CG1	ILE	C	33	27.221	53.922	74.939	1.00	43.37	C
ATOM	9531	CD1	ILE	C	33	26.172	54.854	74.384	1.00	49.43	C
ATOM	9535	CG2	ILE	C	33	26.295	52.247	76.459	1.00	41.18	C
ATOM	9539	C	ILE	C	33	27.769	50.425	75.211	1.00	36.61	C
ATOM	9540	O	ILE	C	33	26.935	49.529	75.421	1.00	38.59	O
ATOM	9541	N	HIS	C	34	28.925	50.499	75.846	1.00	34.61	N
ATOM	9543	CA	HIS	C	34	29.162	49.613	76.966	1.00	34.71	C
ATOM	9545	CB	HIS	C	34	30.200	48.643	76.574	1.00	33.97	C
ATOM	9548	CG	HIS	C	34	30.194	48.311	75.141	1.00	34.26	C
ATOM	9549	ND1	HIS	C	34	29.367	47.348	74.630	1.00	38.92	N
ATOM	9551	CE1	HIS	C	34	29.607	47.205	73.339	1.00	38.14	C
ATOM	9553	NE2	HIS	C	34	30.540	48.071	72.995	1.00	37.85	N

ATOM	9555	CD2	HIS	C	34	30.930	48.773	74.108	1.00	34.95	C
ATOM	9557	C	HIS	C	34	29.522	50.260	78.342	1.00	34.32	C
ATOM	9558	O	HIS	C	34	29.807	51.432	78.392	1.00	33.64	O
ATOM	9559	N	TRP	C	35	29.445	49.465	79.426	1.00	34.27	N
ATOM	9561	CA	TRP	C	35	29.783	49.896	80.759	1.00	34.35	C
ATOM	9563	CB	TRP	C	35	28.560	49.879	81.571	1.00	35.41	C
ATOM	9566	CG	TRP	C	35	27.514	50.870	81.176	1.00	38.77	C
ATOM	9567	CD1	TRP	C	35	26.443	50.635	80.362	1.00	38.77	C
ATOM	9569	NE1	TRP	C	35	25.680	51.764	80.262	1.00	39.07	N
ATOM	9571	CE2	TRP	C	35	26.201	52.740	81.058	1.00	39.78	C
ATOM	9572	CD2	TRP	C	35	27.353	52.211	81.662	1.00	37.48	C
ATOM	9573	CE3	TRP	C	35	28.075	53.018	82.501	1.00	34.96	C
ATOM	9575	CZ3	TRP	C	35	27.628	54.293	82.738	1.00	38.38	C
ATOM	9577	CH2	TRP	C	35	26.484	54.789	82.138	1.00	41.25	C
ATOM	9579	CZ2	TRP	C	35	25.744	54.022	81.306	1.00	42.46	C
ATOM	9581	C	TRP	C	35	30.803	49.082	81.568	1.00	34.40	C
ATOM	9582	O	TRP	C	35	30.787	47.871	81.643	1.00	34.68	O
ATOM	9583	N	TYR	C	36	31.619	49.809	82.295	1.00	34.73	N
ATOM	9585	CA	TYR	C	36	32.679	49.273	83.080	1.00	34.84	C
ATOM	9587	CB	TYR	C	36	33.979	49.790	82.457	1.00	33.85	C
ATOM	9590	CG	TYR	C	36	34.192	49.428	81.000	1.00	32.89	C
ATOM	9591	CD1	TYR	C	36	33.730	50.226	79.935	1.00	34.08	C
ATOM	9593	CH1	TYR	C	36	33.954	49.861	78.569	1.00	30.47	C
ATOM	9595	CZ	TYR	C	36	34.628	48.702	78.318	1.00	33.75	C
ATOM	9596	OH	TYR	C	36	34.972	48.211	77.099	1.00	32.78	O
ATOM	9598	CE2	TYR	C	36	35.081	47.932	79.350	1.00	36.07	C
ATOM	9600	CD2	TYR	C	36	34.855	48.298	80.683	1.00	34.48	C
ATOM	9602	C	TYR	C	36	32.638	49.720	84.560	1.00	36.53	C
ATOM	9603	O	TYR	C	36	32.184	50.821	84.911	1.00	37.45	O
ATOM	9604	N	GLN	C	37	33.181	48.875	85.422	1.00	37.01	N
ATOM	9606	CA	GLN	C	37	33.485	49.253	86.776	1.00	37.99	C
ATOM	9608	CB	GLN	C	37	32.866	48.245	87.662	1.00	40.20	C
ATOM	9611	CG	GLN	C	37	33.024	48.454	89.097	1.00	43.44	C
ATOM	9614	CD	GLN	C	37	32.484	47.260	89.850	1.00	44.50	C
ATOM	9615	OE1	GLN	C	37	33.095	46.188	89.830	1.00	41.97	O
ATOM	9616	NE2	GLN	C	37	31.341	47.450	90.519	1.00	45.99	N
ATOM	9619	C	GLN	C	37	34.971	49.202	86.950	1.00	38.04	C
ATOM	9620	O	GLN	C	37	35.576	48.347	86.420	1.00	37.13	O
ATOM	9621	N	GLN	C	38	35.532	50.155	87.691	1.00	39.43	N
ATOM	9623	CA	GLN	C	38	36.916	50.233	88.006	1.00	40.11	C
ATOM	9625	CB	GLN	C	38	37.572	51.356	87.212	1.00	40.00	C
ATOM	9628	CG	GLN	C	38	39.138	51.282	87.328	1.00	41.59	C
ATOM	9631	CD	GLN	C	38	39.903	52.189	86.386	1.00	39.71	C
ATOM	9632	OE1	GLN	C	38	40.911	51.749	85.818	1.00	39.37	O
ATOM	9633	NE2	GLN	C	38	39.488	53.456	86.280	1.00	36.17	N
ATOM	9636	C	GLN	C	38	37.025	50.536	89.490	1.00	42.44	C
ATOM	9637	O	GLN	C	38	36.535	51.554	89.948	1.00	43.21	O
ATOM	9638	N	ARG	C	39	37.659	49.658	90.248	1.00	43.81	N
ATOM	9640	CA	ARG	C	39	37.854	49.916	91.649	1.00	46.09	C
ATOM	9642	CB	ARG	C	39	37.775	48.654	92.479	1.00	47.38	C
ATOM	9645	CG	ARG	C	39	36.378	48.003	92.388	1.00	47.92	C
ATOM	9648	CD	ARG	C	39	36.268	46.636	93.005	1.00	49.95	C
ATOM	9651	NE	ARG	C	39	34.888	46.233	93.235	1.00	51.18	N
ATOM	9653	CZ	ARG	C	39	34.457	44.976	93.111	1.00	53.33	C
ATOM	9654	NH1	ARG	C	39	35.280	44.025	92.746	1.00	55.36	N
ATOM	9657	NH2	ARG	C	39	33.198	44.656	93.305	1.00	54.57	N
ATOM	9660	C	ARG	C	39	39.227	50.474	91.698	1.00	48.48	C
ATOM	9661	O	ARG	C	39	40.076	50.144	90.848	1.00	48.36	O
ATOM	9662	N	THR	C	40	39.446	51.325	92.696	1.00	50.49	N
ATOM	9664	CA	THR	C	40	40.767	51.785	93.054	1.00	52.37	C
ATOM	9666	CB	THR	C	40	40.743	52.104	94.505	1.00	54.92	C
ATOM	9668	OG1	THR	C	40	39.665	53.023	94.716	1.00	55.56	O
ATOM	9670	CG2	THR	C	40	41.930	52.878	94.904	1.00	57.62	C
ATOM	9674	C	THR	C	40	41.826	50.749	92.731	1.00	53.36	C
ATOM	9675	O	THR	C	40	41.665	49.544	93.025	1.00	54.89	O
ATOM	9676	N	ASN	C	41	42.870	51.206	92.053	1.00	52.76	N
ATOM	9678	CA	ASN	C	41	44.015	50.359	91.762	1.00	54.22	C
ATOM	9680	CB	ASN	C	41	44.688	49.980	93.075	1.00	58.44	C

ATOM	9683	CG	ASN	C	41	45.154	51.230	93.865	1.00	63.41	C
ATOM	9684	OD1	ASN	C	41	45.183	52.360	93.337	1.00	62.65	O
ATOM	9685	ND2	ASN	C	41	45.482	51.031	95.136	1.00	66.15	N
ATOM	9688	C	ASN	C	41	43.781	49.126	90.892	1.00	51.30	C
ATOM	9689	O	ASN	C	41	44.628	48.262	90.811	1.00	52.22	O
ATOM	9690	N	GLY	C	42	42.667	49.105	90.189	1.00	47.41	N
ATOM	9692	CA	GLY	C	42	42.301	47.978	89.359	1.00	46.02	C
ATOM	9695	C	GLY	C	42	42.014	48.314	87.911	1.00	43.20	C
ATOM	9696	O	GLY	C	42	41.863	49.478	87.503	1.00	41.61	O
ATOM	9697	N	SER	C	43	41.944	47.296	87.084	1.00	42.43	N
ATOM	9699	CA	SER	C	43	41.710	47.632	85.715	1.00	41.19	C
ATOM	9701	CB	SER	C	43	42.475	46.773	84.770	1.00	41.96	C
ATOM	9704	OG	SER	C	43	42.809	45.525	85.299	1.00	46.75	O
ATOM	9706	C	SER	C	43	40.215	47.594	85.505	1.00	39.79	C
ATOM	9707	O	SER	C	43	39.487	47.122	86.353	1.00	41.05	O
ATOM	9708	N	PRO	C	44	39.700	48.223	84.476	1.00	38.34	N
ATOM	9709	CA	PRO	C	44	38.252	48.202	84.306	1.00	37.29	C
ATOM	9711	CB	PRO	C	44	37.996	49.170	83.120	1.00	36.21	C
ATOM	9714	CG	PRO	C	44	39.228	49.834	82.904	1.00	37.50	C
ATOM	9717	CD	PRO	C	44	40.363	49.045	83.467	1.00	38.27	C
ATOM	9720	C	PRO	C	44	37.665	46.810	84.093	1.00	35.59	C
ATOM	9721	O	PRO	C	44	38.311	45.834	83.755	1.00	36.62	O
ATOM	9722	N	ARG	C	45	36.390	46.753	84.321	1.00	34.62	N
ATOM	9724	CA	ARG	C	45	35.656	45.514	84.232	1.00	35.68	C
ATOM	9726	CB	ARG	C	45	35.337	45.068	85.609	1.00	37.79	C
ATOM	9729	CG	ARG	C	45	34.555	43.888	85.738	1.00	38.23	C
ATOM	9732	CD	ARG	C	45	34.072	43.791	87.116	1.00	42.83	C
ATOM	9735	NE	ARG	C	45	33.417	42.512	87.398	1.00	49.92	N
ATOM	9737	CZ	ARG	C	45	32.649	42.276	88.464	1.00	48.72	C
ATOM	9738	NH1	ARG	C	45	32.470	43.244	89.332	1.00	42.80	N
ATOM	9741	NH2	ARG	C	45	32.061	41.070	88.622	1.00	53.29	N
ATOM	9744	C	ARG	C	45	34.371	45.749	83.473	1.00	34.81	C
ATOM	9745	O	ARG	C	45	33.579	46.617	83.770	1.00	34.72	O
ATOM	9746	N	LEU	C	46	34.174	44.950	82.464	1.00	35.29	N
ATOM	9748	CA	LEU	C	46	33.028	45.109	81.603	1.00	34.83	C
ATOM	9750	CB	LEU	C	46	33.294	44.349	80.299	1.00	34.21	C
ATOM	9753	CG	LEU	C	46	32.122	44.073	79.436	1.00	33.10	C
ATOM	9755	CD1	LEU	C	46	31.697	45.418	78.882	1.00	34.82	C
ATOM	9759	CD2	LEU	C	46	32.515	43.060	78.411	1.00	33.01	C
ATOM	9763	C	LEU	C	46	31.824	44.529	82.356	1.00	36.54	C
ATOM	9764	O	LEU	C	46	31.892	43.392	82.806	1.00	38.07	O
ATOM	9765	N	LEU	C	47	30.782	45.344	82.478	1.00	36.50	N
ATOM	9767	CA	LEU	C	47	29.501	45.034	83.164	1.00	39.21	C
ATOM	9769	CB	LEU	C	47	29.061	46.227	83.993	1.00	39.56	C
ATOM	9772	CG	LEU	C	47	30.000	46.623	85.085	1.00	39.66	C
ATOM	9774	CD1	LEU	C	47	29.636	47.995	85.413	1.00	40.73	C
ATOM	9778	CD2	LEU	C	47	29.808	45.699	86.273	1.00	43.21	C
ATOM	9782	C	LEU	C	47	28.293	44.773	82.237	1.00	39.13	C
ATOM	9783	O	LEU	C	47	27.510	43.838	82.443	1.00	41.74	O
ATOM	9784	N	ILE	C	48	28.172	45.648	81.243	1.00	36.93	N
ATOM	9786	CA	ILE	C	48	27.142	45.636	80.277	1.00	37.02	C
ATOM	9788	CB	ILE	C	48	26.072	46.575	80.758	1.00	38.96	C
ATOM	9790	CG1	ILE	C	48	25.469	45.944	82.022	1.00	42.23	C
ATOM	9793	CD1	ILE	C	48	24.088	45.977	82.163	1.00	43.44	C
ATOM	9797	CG2	ILE	C	48	25.048	46.823	79.629	1.00	41.51	C
ATOM	9801	C	ILE	C	48	27.663	46.061	78.952	1.00	34.72	C
ATOM	9802	O	ILE	C	48	28.368	47.060	78.847	1.00	33.27	O
ATOM	9803	N	LYS	C	49	27.288	45.296	77.927	1.00	35.49	N
ATOM	9805	CA	LYS	C	49	27.566	45.597	76.514	1.00	33.86	C
ATOM	9807	CB	LYS	C	49	28.333	44.450	75.916	1.00	33.07	C
ATOM	9810	CG	LYS	C	49	27.661	43.106	76.022	1.00	38.02	C
ATOM	9813	CD	LYS	C	49	28.443	42.066	75.280	1.00	39.19	C
ATOM	9816	CE	LYS	C	49	27.679	41.455	74.125	1.00	40.58	C
ATOM	9819	NZ	LYS	C	49	28.697	40.846	73.223	1.00	41.24	N
ATOM	9823	C	LYS	C	49	26.249	45.889	75.720	1.00	34.77	C
ATOM	9824	O	LYS	C	49	25.183	45.350	75.981	1.00	35.85	O
ATOM	9825	N	TYR	C	50	26.335	46.780	74.771	1.00	33.83	N
ATOM	9827	CA	TYR	C	50	25.191	47.100	73.987	1.00	37.51	C

ATOM	9829	CB	TYR	C	50	24.878	46.016	72.959	1.00	38.19	C
ATOM	9832	CG	TYR	C	50	26.067	45.851	72.028	1.00	38.64	C
ATOM	9833	CD1	TYR	C	50	26.984	44.826	72.216	1.00	37.12	C
ATOM	9835	CE1	TYR	C	50	28.076	44.706	71.409	1.00	33.93	C
ATOM	9837	CZ	TYR	C	50	28.306	45.624	70.421	1.00	32.98	C
ATOM	9838	OH	TYR	C	50	29.410	45.521	69.616	1.00	34.60	O
ATOM	9840	CE2	TYR	C	50	27.482	46.665	70.239	1.00	34.65	C
ATOM	9842	CD2	TYR	C	50	26.363	46.797	71.037	1.00	38.98	C
ATOM	9844	C	TYR	C	50	24.014	47.451	74.872	1.00	40.75	C
ATOM	9845	O	TYR	C	50	22.900	46.896	74.766	1.00	42.82	O
ATOM	9846	N	ALA	C	51	24.282	48.432	75.747	1.00	40.74	N
ATOM	9848	CA	ALA	C	51	23.233	49.188	76.446	1.00	41.98	C
ATOM	9850	CB	ALA	C	51	22.286	49.720	75.487	1.00	42.55	C
ATOM	9854	C	ALA	C	51	22.556	48.363	77.536	1.00	43.53	C
ATOM	9855	O	ALA	C	51	22.440	48.796	78.673	1.00	43.80	O
ATOM	9856	N	SER	C	52	22.203	47.139	77.210	1.00	44.89	N
ATOM	9858	CA	SER	C	52	21.403	46.352	78.108	1.00	48.67	C
ATOM	9860	CB	SER	C	52	19.959	46.450	77.643	1.00	52.04	C
ATOM	9863	OG	SER	C	52	19.845	45.977	76.294	1.00	53.55	O
ATOM	9865	C	SER	C	52	21.783	44.880	78.181	1.00	48.92	C
ATOM	9866	O	SER	C	52	21.086	44.131	78.910	1.00	50.69	O
ATOM	9867	N	GLU	C	53	22.858	44.477	77.491	1.00	46.03	N
ATOM	9869	CA	GLU	C	53	23.166	43.060	77.423	1.00	47.67	C
ATOM	9871	CB	GLU	C	53	23.704	42.543	76.064	1.00	46.94	C
ATOM	9874	CG	GLU	C	53	22.938	42.960	74.829	1.00	49.55	C
ATOM	9877	CD	GLU	C	53	23.501	42.450	73.448	1.00	51.85	C
ATOM	9878	OE1	GLU	C	53	24.687	41.939	73.270	1.00	43.43	O
ATOM	9879	OE2	GLU	C	53	22.655	42.572	72.483	1.00	57.14	O
ATOM	9880	C	GLU	C	53	24.150	42.708	78.518	1.00	46.50	C
ATOM	9881	O	GLU	C	53	25.307	43.167	78.557	1.00	42.83	O
ATOM	9882	N	SER	C	54	23.689	41.775	79.342	1.00	49.02	N
ATOM	9884	CA	SER	C	54	24.458	41.304	80.479	1.00	49.21	C
ATOM	9886	CB	SER	C	54	23.589	40.467	81.346	1.00	52.35	C
ATOM	9889	OG	SER	C	54	23.295	39.351	80.585	1.00	56.61	O
ATOM	9891	C	SER	C	54	25.636	40.452	80.034	1.00	46.98	C
ATOM	9892	O	SER	C	54	25.625	39.895	78.944	1.00	45.39	O
ATOM	9893	N	ILE	C	55	26.611	40.392	80.941	1.00	45.65	N
ATOM	9895	CA	ILE	C	55	27.878	39.764	80.739	1.00	44.10	C
ATOM	9897	CB	ILE	C	55	28.910	40.806	80.912	1.00	40.90	C
ATOM	9899	CG1	ILE	C	55	29.119	41.482	79.584	1.00	40.37	C
ATOM	9902	CD1	ILE	C	55	29.086	42.819	79.727	1.00	42.31	C
ATOM	9906	CG2	ILE	C	55	30.195	40.224	81.246	1.00	42.13	C
ATOM	9910	C	ILE	C	55	28.092	38.693	81.748	1.00	47.09	C
ATOM	9911	O	ILE	C	55	27.684	38.816	82.892	1.00	49.47	O
ATOM	9912	N	SER	C	56	28.746	37.611	81.384	1.00	48.71	N
ATOM	9914	CA	SER	C	56	28.702	36.538	82.343	1.00	52.52	C
ATOM	9916	CB	SER	C	56	28.994	35.174	81.716	1.00	54.74	C
ATOM	9919	OG	SER	C	56	30.317	34.847	82.071	1.00	57.29	O
ATOM	9921	C	SER	C	56	29.657	36.960	83.473	1.00	51.73	C
ATOM	9922	O	SER	C	56	30.536	37.820	83.277	1.00	48.86	O
ATOM	9923	N	GLY	C	57	29.442	36.398	84.659	1.00	54.10	N
ATOM	9925	CA	GLY	C	57	30.238	36.705	85.830	1.00	53.98	C
ATOM	9928	C	GLY	C	57	29.779	37.965	86.529	1.00	52.14	C
ATOM	9929	O	GLY	C	57	30.328	38.382	87.538	1.00	52.51	O
ATOM	9930	N	ILE	C	58	28.756	38.598	86.015	1.00	50.75	N
ATOM	9932	CA	ILE	C	58	28.314	39.794	86.658	1.00	49.91	C
ATOM	9934	CB	ILE	C	58	28.314	40.938	85.671	1.00	46.82	C
ATOM	9936	CG1	ILE	C	58	29.765	41.294	85.421	1.00	45.06	C
ATOM	9939	CD1	ILE	C	58	29.908	41.654	84.172	1.00	45.24	C
ATOM	9943	CG2	ILE	C	58	27.517	42.240	86.215	1.00	45.62	C
ATOM	9947	C	ILE	C	58	26.990	39.664	87.360	1.00	53.05	C
ATOM	9948	O	ILE	C	58	25.977	39.199	86.799	1.00	53.28	O
ATOM	9949	N	PRO	C	59	27.025	40.124	88.607	1.00	54.73	N
ATOM	9950	CA	PRO	C	59	25.850	40.053	89.461	1.00	58.09	C
ATOM	9952	CB	PRO	C	59	26.262	40.797	90.748	1.00	58.25	C
ATOM	9955	CG	PRO	C	59	27.651	41.330	90.560	1.00	55.53	C
ATOM	9958	CD	PRO	C	59	28.183	40.749	89.287	1.00	53.29	C
ATOM	9961	C	PRO	C	59	24.629	40.652	88.749	1.00	57.82	C

ATOM 9962	O	PRO	C	59	24.644	41.654	88.035	1.00	53.30	O
ATOM 9963	N	SER	C	60	23.562	39.887	88.909	1.00	63.33	N
ATOM 9965	CA	SER	C	60	22.219	40.188	88.390	1.00	65.73	C
ATOM 9967	CB	SER	C	60	21.267	39.142	88.972	1.00	71.17	C
ATOM 9970	OG	SER	C	60	21.740	38.742	90.265	1.00	74.60	O
ATOM 9972	C	SER	C	60	21.779	41.655	88.744	1.00	64.64	C
ATOM 9973	O	SER	C	60	21.114	42.343	87.979	1.00	64.25	O
ATOM 9974	N	ARG	C	61	22.185	42.151	89.894	1.00	64.61	N
ATOM 9976	CA	ARG	C	61	21.829	43.513	90.261	1.00	63.48	C
ATOM 9978	CB	ARG	C	61	22.297	43.845	91.663	1.00	64.21	C
ATOM 9981	CG	ARG	C	61	23.414	43.056	92.181	1.00	63.18	C
ATOM 9984	CD	ARG	C	61	24.104	43.802	93.236	1.00	63.84	C
ATOM 9987	NE	ARG	C	61	25.537	43.714	93.099	1.00	61.19	N
ATOM 9989	CZ	ARG	C	61	26.362	43.963	94.043	1.00	58.51	C
ATOM 9990	NH1	ARG	C	61	25.979	44.372	95.210	1.00	68.13	N
ATOM 9993	NH2	ARG	C	61	27.590	43.835	93.832	1.00	58.31	N
ATOM 9996	C	ARG	C	61	22.316	44.585	89.309	1.00	59.40	C
ATOM 9997	O	ARG	C	61	21.757	45.689	89.288	1.00	60.37	O
ATOM 9998	N	PHE	C	62	23.370	44.295	88.562	1.00	55.68	N
ATOM 10000	CA	PHE	C	62	23.773	45.184	87.492	1.00	51.73	C
ATOM 10002	CB	PHE	C	62	25.226	44.908	87.114	1.00	49.74	C
ATOM 10005	CG	PHE	C	62	26.190	45.398	88.121	1.00	48.14	C
ATOM 10006	CD1	PHE	C	62	26.773	44.542	89.009	1.00	49.83	C
ATOM 10008	CE1	PHE	C	62	27.607	44.999	89.940	1.00	50.62	C
ATOM 10010	CZ	PHE	C	62	27.859	46.353	90.035	1.00	49.05	C
ATOM 10012	CE2	PHE	C	62	27.252	47.208	89.173	1.00	46.83	C
ATOM 10014	CD2	PHE	C	62	26.440	46.724	88.219	1.00	46.75	C
ATOM 10016	C	PHE	C	62	22.859	45.064	86.262	1.00	51.66	C
ATOM 10017	O	PHE	C	62	22.550	43.980	85.814	1.00	52.39	O
ATOM 10018	N	SER	C	63	22.447	46.200	85.726	1.00	50.26	N
ATOM 10020	CA	SER	C	63	21.681	46.249	84.502	1.00	51.03	C
ATOM 10022	CB	SER	C	63	20.242	45.917	84.784	1.00	55.13	C
ATOM 10025	OG	SER	C	63	19.490	47.066	85.148	1.00	57.69	O
ATOM 10027	C	SER	C	63	21.835	47.599	83.758	1.00	49.12	C
ATOM 10028	O	SER	C	63	22.366	48.536	84.265	1.00	47.72	O
ATOM 10029	N	GLY	C	64	21.405	47.648	82.513	1.00	49.99	N
ATOM 10031	CA	GLY	C	64	21.517	48.834	81.694	1.00	48.78	C
ATOM 10034	C	GLY	C	64	20.311	48.920	80.758	1.00	52.32	C
ATOM 10035	O	GLY	C	64	19.752	47.899	80.330	1.00	54.84	O
ATOM 10036	N	SER	C	65	19.880	50.152	80.489	1.00	53.63	N
ATOM 10038	CA	SER	C	65	18.816	50.477	79.546	1.00	56.59	C
ATOM 10040	CB	SER	C	65	17.528	50.804	80.288	1.00	61.01	C
ATOM 10043	OG	SER	C	65	17.844	51.826	81.211	1.00	63.48	O
ATOM 10045	C	SER	C	65	19.200	51.719	78.732	1.00	55.34	C
ATOM 10046	O	SER	C	65	20.157	52.439	79.066	1.00	53.24	O
ATOM 10047	N	GLY	C	66	18.429	51.969	77.660	1.00	57.45	N
ATOM 10049	CA	GLY	C	66	18.670	53.097	76.740	1.00	56.09	C
ATOM 10052	C	GLY	C	66	18.946	52.775	75.281	1.00	53.82	C
ATOM 10053	O	GLY	C	66	19.495	51.716	74.976	1.00	50.48	O
ATOM 10054	N	SER	C	67	18.490	53.659	74.404	1.00	55.01	N
ATOM 10056	CA	SER	C	67	18.997	53.730	73.072	1.00	55.14	C
ATOM 10058	CB	SER	C	67	18.520	52.591	72.105	1.00	56.95	C
ATOM 10061	OG	SER	C	67	17.150	52.540	71.891	1.00	61.53	O
ATOM 10063	C	SER	C	67	18.766	55.098	72.509	1.00	57.64	C
ATOM 10064	O	SER	C	67	17.849	55.760	72.887	1.00	61.04	O
ATOM 10065	N	GLY	C	68	19.654	55.501	71.597	1.00	57.28	N
ATOM 10067	CA	GLY	C	68	19.701	56.829	71.017	1.00	59.22	C
ATOM 10070	C	GLY	C	68	20.913	57.529	71.590	1.00	56.57	C
ATOM 10071	O	GLY	C	68	22.008	57.423	71.141	1.00	53.93	O
ATOM 10072	N	THR	C	69	20.681	58.136	72.712	1.00	58.48	N
ATOM 10074	CA	THR	C	69	21.398	59.306	73.137	1.00	59.19	C
ATOM 10076	CB	THR	C	69	20.645	60.517	72.548	1.00	64.50	C
ATOM 10078	CG1	THR	C	69	21.537	61.132	71.613	1.00	67.14	O
ATOM 10080	CG2	THR	C	69	20.230	61.612	73.564	1.00	66.00	C
ATOM 10084	C	THR	C	69	21.448	59.347	74.621	1.00	57.98	C
ATOM 10085	O	THR	C	69	22.437	59.751	75.159	1.00	55.59	O
ATOM 10086	N	ASP	C	70	20.375	58.909	75.272	1.00	60.07	N
ATOM 10088	CA	ASP	C	70	20.375	58.727	76.714	1.00	60.09	C



ATOM	10090	CB	ASP	C	70	19.133	59.425	77.247	1.00	64.32	C
ATOM	10093	CG	ASP	C	70	19.158	60.961	76.992	1.00	70.77	C
ATOM	10094	OD1	ASP	C	70	20.277	61.595	77.042	1.00	67.90	O
ATOM	10095	OD2	ASP	C	70	18.069	61.615	76.776	1.00	79.56	O
ATOM	10096	C	ASP	C	70	20.433	57.271	77.244	1.00	57.20	C
ATOM	10097	O	ASP	C	70	19.434	56.565	77.157	1.00	61.34	O
ATOM	10098	N	PHE	C	71	21.564	56.871	77.814	1.00	52.43	N
ATOM	10100	CA	PHE	C	71	21.775	55.575	78.451	1.00	51.08	C
ATOM	10102	CB	PHE	C	71	23.020	54.922	77.855	1.00	48.63	C
ATOM	10105	CG	PHE	C	71	23.070	55.028	76.388	1.00	47.77	C
ATOM	10106	CD1	PHE	C	71	23.558	56.186	75.786	1.00	46.39	C
ATOM	10108	CE1	PHE	C	71	23.531	56.351	74.450	1.00	47.37	C
ATOM	10110	CZ	PHE	C	71	23.001	55.340	73.654	1.00	50.56	C
ATOM	10112	CE2	PHE	C	71	22.502	54.172	74.245	1.00	49.84	C
ATOM	10114	CD2	PHE	C	71	22.531	54.039	75.620	1.00	48.19	C
ATOM	10116	C	PHE	C	71	21.950	55.645	79.988	1.00	50.97	C
ATOM	10117	O	PHE	C	71	22.106	56.674	80.535	1.00	52.40	O
ATOM	10118	N	THR	C	72	21.907	54.515	80.672	1.00	50.66	N
ATOM	10120	CA	THR	C	72	21.602	54.430	82.111	1.00	51.41	C
ATOM	10122	CB	THR	C	72	20.094	54.686	82.394	1.00	55.42	C
ATOM	10124	OG1	THR	C	72	19.880	56.096	82.612	1.00	58.52	O
ATOM	10126	CG2	THR	C	72	19.663	54.044	83.737	1.00	55.85	C
ATOM	10130	C	THR	C	72	22.009	53.029	82.632	1.00	49.89	C
ATOM	10131	O	THR	C	72	21.515	51.980	82.190	1.00	50.33	O
ATOM	10132	N	LEU	C	73	22.945	53.034	83.554	1.00	48.22	N
ATOM	10134	CA	LEU	C	73	23.410	51.850	84.229	1.00	47.33	C
ATOM	10136	CB	LEU	C	73	24.898	52.013	84.360	1.00	43.98	C
ATOM	10139	CG	LEU	C	73	25.579	50.891	85.084	1.00	43.79	C
ATOM	10141	CD1	LEU	C	73	25.447	49.588	84.285	1.00	43.27	C
ATOM	10145	CD2	LEU	C	73	27.020	51.257	85.309	1.00	39.29	C
ATOM	10149	C	LEU	C	73	22.760	51.821	85.616	1.00	50.10	C
ATOM	10150	O	LEU	C	73	22.792	52.823	86.325	1.00	51.66	O
ATOM	10151	N	SER	C	74	22.167	50.743	86.071	1.00	51.27	N
ATOM	10153	CA	SER	C	74	21.730	50.879	87.435	1.00	54.82	C
ATOM	10155	CB	SER	C	74	20.291	51.311	87.436	1.00	57.75	C
ATOM	10158	OG	SER	C	74	19.645	50.362	86.713	1.00	60.90	O
ATOM	10160	C	SER	C	74	21.976	49.663	88.313	1.00	56.29	C
ATOM	10161	O	SER	C	74	22.286	48.605	87.809	1.00	56.37	O
ATOM	10162	N	ILE	C	75	21.872	49.823	89.634	1.00	58.41	N
ATOM	10164	CA	ILE	C	75	22.106	48.720	90.561	1.00	59.78	C
ATOM	10166	CB	ILE	C	75	23.356	49.038	91.371	1.00	57.98	C
ATOM	10168	CG1	ILE	C	75	24.460	49.483	90.438	1.00	54.60	C
ATOM	10171	CD1	ILE	C	75	25.843	49.606	91.120	1.00	55.60	C
ATOM	10175	CG2	ILE	C	75	23.802	47.821	92.132	1.00	59.77	C
ATOM	10179	C	ILE	C	75	20.937	48.621	91.491	1.00	64.00	C
ATOM	10180	O	ILE	C	75	20.583	49.616	92.011	1.00	65.00	O
ATOM	10181	N	ASN	C	76	20.325	47.458	91.705	1.00	67.66	N
ATOM	10183	CA	ASN	C	76	19.433	47.273	92.874	1.00	72.86	C
ATOM	10185	CB	ASN	C	76	18.573	46.066	92.666	1.00	77.07	C
ATOM	10188	CG	ASN	C	76	17.770	46.202	91.447	1.00	80.49	C
ATOM	10189	OD1	ASN	C	76	17.965	47.202	90.704	1.00	80.41	O
ATOM	10190	ND2	ASN	C	76	16.849	45.249	91.198	1.00	83.51	N
ATOM	10193	C	ASN	C	76	20.234	47.037	94.121	1.00	73.25	C
ATOM	10194	O	ASN	C	76	21.376	46.588	94.067	1.00	71.87	O
ATOM	10195	N	SER	C	77	19.686	47.302	95.282	1.00	75.89	N
ATOM	10197	CA	SER	C	77	20.510	47.059	96.480	1.00	76.19	C
ATOM	10199	CB	SER	C	77	20.179	45.692	97.115	1.00	80.08	C
ATOM	10202	OG	SER	C	77	21.236	44.803	96.770	1.00	81.82	O
ATOM	10204	C	SER	C	77	22.056	47.202	96.231	1.00	70.21	C
ATOM	10205	O	SER	C	77	22.780	46.223	95.964	1.00	66.16	O
ATOM	10206	N	VAL	C	78	22.515	48.446	96.376	1.00	68.55	N
ATOM	10208	CA	VAL	C	78	23.958	48.795	96.322	1.00	65.96	C
ATOM	10210	CB	VAL	C	78	24.263	50.293	96.464	1.00	64.03	C
ATOM	10212	CG1	VAL	C	78	25.675	50.540	96.047	1.00	59.70	C
ATOM	10216	CG2	VAL	C	78	23.367	51.101	95.666	1.00	63.10	C
ATOM	10220	C	VAL	C	78	24.733	48.220	97.475	1.00	68.31	C
ATOM	10221	O	VAL	C	78	24.269	48.259	98.604	1.00	70.79	O
ATOM	10222	N	GLU	C	79	25.939	47.756	97.184	1.00	67.29	N

ATOM	10224	CA	GLU	C	79	26.747	47.109	98.182	1.00	70.49	C
ATOM	10226	CB	GLU	C	79	27.015	45.646	97.772	1.00	71.59	C
ATOM	10229	CG	GLU	C	79	27.567	44.817	98.955	1.00	78.33	C
ATOM	10232	CD	GLU	C	79	27.217	43.318	98.941	1.00	81.18	C
ATOM	10233	OE1	GLU	C	79	27.474	42.734	97.843	1.00	73.90	O
ATOM	10234	OE2	GLU	C	79	26.760	42.776	100.055	1.00	81.77	O
ATOM	10235	C	GLU	C	79	28.063	47.841	98.381	1.00	69.03	C
ATOM	10236	O	GLU	C	79	28.525	48.598	97.500	1.00	66.31	O
ATOM	10237	N	SER	C	80	28.689	47.602	99.539	1.00	71.62	N
ATOM	10239	CA	SER	C	80	30.037	48.142	99.822	1.00	70.15	C
ATOM	10241	CB	SER	C	80	30.613	47.569	101.134	1.00	74.08	C
ATOM	10244	OG	SER	C	80	31.587	46.535	100.904	1.00	74.59	O
ATOM	10246	C	SER	C	80	30.987	47.854	98.682	1.00	66.56	C
ATOM	10247	O	SER	C	80	31.837	48.668	98.330	1.00	65.25	O
ATOM	10248	N	GLU	C	81	30.846	46.681	98.119	1.00	65.84	N
ATOM	10250	CA	GLU	C	81	31.744	46.272	97.084	1.00	64.00	C
ATOM	10252	CB	GLU	C	81	31.555	44.781	96.945	1.00	67.28	C
ATOM	10255	CG	GLU	C	81	32.772	43.977	96.520	1.00	70.30	C
ATOM	10258	CD	GLU	C	81	32.322	42.601	95.984	1.00	76.21	C
ATOM	10259	OE1	GLU	C	81	31.393	41.987	96.673	1.00	77.86	O
ATOM	10260	OE2	GLU	C	81	32.876	42.177	94.881	1.00	75.85	O
ATOM	10261	C	GLU	C	81	31.451	47.010	95.746	1.00	59.35	C
ATOM	10262	O	GLU	C	81	32.154	46.833	94.764	1.00	57.13	O
ATOM	10263	N	ASP	C	82	30.422	47.851	95.702	1.00	57.91	N
ATOM	10265	CA	ASP	C	82	30.121	48.600	94.488	1.00	54.01	C
ATOM	10267	CB	ASP	C	82	28.618	48.743	94.296	1.00	54.53	C
ATOM	10270	CG	ASP	C	82	27.901	47.367	94.085	1.00	57.28	C
ATOM	10271	OD1	ASP	C	82	28.609	46.391	93.687	1.00	53.65	O
ATOM	10272	OD2	ASP	C	82	26.642	47.201	94.289	1.00	58.60	O
ATOM	10273	C	ASP	C	82	30.766	49.950	94.511	1.00	52.01	C
ATOM	10274	O	ASP	C	82	30.626	50.689	93.606	1.00	49.44	O
ATOM	10275	N	ILE	C	83	31.480	50.285	95.562	1.00	53.49	N
ATOM	10277	CA	ILE	C	83	32.314	51.486	95.551	1.00	52.54	C
ATOM	10279	CB	ILE	C	83	32.877	51.678	96.961	1.00	54.86	C
ATOM	10281	CG1	ILE	C	83	31.810	52.202	97.892	1.00	56.48	C
ATOM	10284	CD1	ILE	C	83	32.220	52.011	99.307	1.00	59.82	C
ATOM	10288	CG2	ILE	C	83	34.042	52.604	96.978	1.00	55.41	C
ATOM	10292	C	ILE	C	83	33.434	51.354	94.470	1.00	50.29	C
ATOM	10293	O	ILE	C	83	34.193	50.354	94.456	1.00	49.66	O
ATOM	10294	N	ALA	C	84	33.528	52.382	93.610	1.00	48.84	N
ATOM	10296	CA	ALA	C	84	34.175	52.304	92.263	1.00	46.44	C
ATOM	10298	CB	ALA	C	84	33.829	50.998	91.537	1.00	44.27	C
ATOM	10302	C	ALA	C	84	33.761	53.452	91.360	1.00	45.36	C
ATOM	10303	O	ALA	C	84	32.673	53.978	91.469	1.00	46.26	O
ATOM	10304	N	ASP	C	85	34.621	53.824	90.437	1.00	44.56	N
ATOM	10306	CA	ASP	C	85	34.175	54.588	89.275	1.00	43.73	C
ATOM	10308	CB	ASP	C	85	35.354	55.295	88.690	1.00	43.97	C
ATOM	10311	CG	ASP	C	85	35.925	56.290	89.604	1.00	47.86	C
ATOM	10312	OD1	ASP	C	85	35.213	57.307	89.833	1.00	51.36	O
ATOM	10313	OD2	ASP	C	85	37.066	56.130	90.098	1.00	46.79	O
ATOM	10314	C	ASP	C	85	33.502	53.735	88.135	1.00	41.60	C
ATOM	10315	O	ASP	C	85	33.984	52.694	87.751	1.00	40.63	O
ATOM	10316	N	TYR	C	86	32.394	54.211	87.600	1.00	40.84	N
ATOM	10318	CA	TYR	C	86	31.741	53.554	86.508	1.00	39.46	C
ATOM	10320	CB	TYR	C	86	30.278	53.370	86.862	1.00	40.82	C
ATOM	10323	CG	TYR	C	86	30.128	52.481	88.089	1.00	41.54	C
ATOM	10324	CD1	TYR	C	86	30.275	52.972	89.390	1.00	40.87	C
ATOM	10326	CE1	TYR	C	86	30.238	52.105	90.477	1.00	42.12	C
ATOM	10328	CZ	TYR	C	86	30.045	50.721	90.274	1.00	43.49	C
ATOM	10329	OH	TYR	C	86	29.967	49.762	91.277	1.00	44.20	O
ATOM	10331	CE2	TYR	C	86	29.911	50.233	88.998	1.00	43.68	C
ATOM	10333	CD2	TYR	C	86	29.947	51.111	87.922	1.00	43.03	C
ATOM	10335	C	TYR	C	86	31.981	54.442	85.282	1.00	39.22	C
ATOM	10336	O	TYR	C	86	31.996	55.699	85.428	1.00	39.82	O
ATOM	10337	N	TYR	C	87	32.248	53.781	84.121	1.00	37.23	N
ATOM	10339	CA	TYR	C	87	32.593	54.411	82.848	1.00	35.32	C
ATOM	10341	CB	TYR	C	87	34.068	54.178	82.513	1.00	34.25	C
ATOM	10344	CG	TYR	C	87	35.078	54.824	83.436	1.00	32.69	C

ATOM	10345	CD1	TYR	C	87	35.673	54.085	84.435	1.00	34.43	C
ATOM	10347	CE1	TYR	C	87	36.624	54.622	85.308	1.00	34.35	C
ATOM	10349	CZ	TYR	C	87	36.944	55.979	85.221	1.00	35.80	C
ATOM	10350	OH	TYR	C	87	37.860	56.518	86.145	1.00	36.98	O
ATOM	10352	CE2	TYR	C	87	36.313	56.765	84.217	1.00	34.38	C
ATOM	10354	CD2	TYR	C	87	35.427	56.154	83.317	1.00	32.88	C
ATOM	10356	C	TYR	C	87	31.659	53.868	81.712	1.00	35.54	C
ATOM	10357	O	TYR	C	87	31.079	52.769	81.798	1.00	33.51	O
ATOM	10358	N	CYS	C	88	31.451	54.688	80.674	1.00	36.35	N
ATOM	10360	CA	CYS	C	88	30.675	54.252	79.500	1.00	36.73	C
ATOM	10362	CB	CYS	C	88	29.397	55.021	79.326	1.00	38.36	C
ATOM	10365	SG	CYS	C	88	29.606	56.785	79.010	1.00	45.26	S
ATOM	10366	C	CYS	C	88	31.526	54.473	78.301	1.00	36.06	C
ATOM	10367	O	CYS	C	88	32.359	55.383	78.363	1.00	37.61	O
ATOM	10368	N	GLN	C	89	31.434	53.593	77.291	1.00	34.22	N
ATOM	10370	CA	GLN	C	89	32.123	53.844	76.047	1.00	35.12	C
ATOM	10372	CB	GLN	C	89	33.376	52.960	75.808	1.00	34.83	C
ATOM	10375	CG	GLN	C	89	33.011	51.589	75.387	1.00	35.80	C
ATOM	10378	CD	GLN	C	89	34.144	50.697	75.122	1.00	32.88	C
ATOM	10379	OE1	GLN	C	89	35.021	50.995	74.338	1.00	28.59	O
ATOM	10380	NE2	GLN	C	89	34.097	49.552	75.751	1.00	34.45	N
ATOM	10383	C	GLN	C	89	31.178	53.728	74.916	1.00	35.20	C
ATOM	10384	O	GLN	C	89	30.136	53.113	75.048	1.00	36.60	O
ATOM	10385	N	GLN	C	90	31.513	54.370	73.812	1.00	35.36	N
ATOM	10387	CA	GLN	C	90	30.724	54.222	72.614	1.00	35.88	C
ATOM	10389	CB	GLN	C	90	30.190	55.561	72.034	1.00	37.15	C
ATOM	10392	CG	GLN	C	90	31.160	56.518	71.509	1.00	38.90	C
ATOM	10395	CD	GLN	C	90	31.751	56.167	70.178	1.00	39.85	C
ATOM	10396	OE1	GLN	C	90	31.045	55.686	69.291	1.00	39.79	O
ATOM	10397	NE2	GLN	C	90	33.055	56.488	70.000	1.00	36.83	N
ATOM	10400	C	GLN	C	90	31.541	53.417	71.654	1.00	34.21	C
ATOM	10401	O	GLN	C	90	32.721	53.427	71.725	1.00	35.03	O
ATOM	10402	N	ASN	C	91	30.827	52.751	70.783	1.00	35.58	N
ATOM	10404	CA	ASN	C	91	31.209	51.680	69.873	1.00	35.22	C
ATOM	10406	CB	ASN	C	91	30.309	50.451	70.175	1.00	34.54	C
ATOM	10409	CG	ASN	C	91	31.052	49.282	69.987	1.00	34.93	C
ATOM	10410	OD1	ASN	C	91	32.257	49.468	69.874	1.00	37.10	O
ATOM	10411	ND2	ASN	C	91	30.452	48.094	69.806	1.00	34.50	N
ATOM	10414	C	ASN	C	91	30.932	52.048	68.387	1.00	36.89	C
ATOM	10415	O	ASN	C	91	31.327	51.330	67.449	1.00	35.22	O
ATOM	10416	N	ASN	C	92	30.203	53.164	68.223	1.00	37.82	N
ATOM	10418	CA	ASN	C	92	29.658	53.596	66.975	1.00	39.19	C
ATOM	10420	CB	ASN	C	92	28.456	54.437	67.328	1.00	42.61	C
ATOM	10423	CG	ASN	C	92	27.489	54.658	66.206	1.00	42.89	C
ATOM	10424	OD1	ASN	C	92	27.520	54.082	65.292	1.00	44.19	O
ATOM	10425	ND2	ASN	C	92	26.568	55.490	66.411	1.00	57.14	N
ATOM	10428	C	ASN	C	92	30.602	54.401	66.135	1.00	39.91	C
ATOM	10429	O	ASN	C	92	30.717	54.126	64.972	1.00	39.51	O
ATOM	10430	N	ASN	C	93	31.291	55.405	66.676	1.00	40.89	N
ATOM	10432	CA	ASN	C	93	32.127	56.280	65.792	1.00	43.39	C
ATOM	10434	CB	ASN	C	93	31.939	57.785	66.086	1.00	45.26	C
ATOM	10437	CG	ASN	C	93	30.611	58.254	65.777	1.00	45.20	C
ATOM	10438	OD1	ASN	C	93	29.775	57.526	65.177	1.00	44.43	O
ATOM	10439	ND2	ASN	C	93	30.318	59.439	66.265	1.00	49.86	N
ATOM	10442	C	ASN	C	93	33.573	55.924	65.885	1.00	42.51	C
ATOM	10443	O	ASN	C	93	33.867	55.305	66.862	1.00	43.58	O
ATOM	10444	N	TRP	C	94	34.457	56.343	64.958	1.00	43.96	N
ATOM	10446	CA	TRP	C	94	35.670	55.658	64.819	1.00	43.09	C
ATOM	10448	CB	TRP	C	94	36.318	55.596	63.431	1.00	45.10	C
ATOM	10451	CG	TRP	C	94	37.929	55.151	63.579	1.00	41.72	C
ATOM	10452	CD1	TRP	C	94	38.440	53.861	63.794	1.00	37.65	C
ATOM	10454	NE1	TRP	C	94	39.800	53.893	63.964	1.00	38.41	N
ATOM	10456	CE2	TRP	C	94	40.213	55.197	63.962	1.00	41.29	C
ATOM	10457	CD2	TRP	C	94	39.081	56.019	63.735	1.00	42.04	C
ATOM	10458	CE3	TRP	C	94	39.264	57.397	63.732	1.00	44.37	C
ATOM	10460	CZ3	TRP	C	94	40.504	57.884	63.875	1.00	46.24	C
ATOM	10462	CH2	TRP	C	94	41.596	57.059	64.053	1.00	46.26	C
ATOM	10464	CZ2	TRP	C	94	41.473	55.715	64.076	1.00	44.06	C

ATOM	10466	C	TRP	C	94	36.842	55.984	65.627	1.00	44.73	C
ATOM	10467	O	TRP	C	94	37.890	55.418	65.277	1.00	50.14	O
ATOM	10468	N	PRO	C	95	36.955	56.786	66.611	1.00	42.69	N
ATOM	10469	CA	PRO	C	95	37.708	56.193	67.739	1.00	39.74	C
ATOM	10471	CB	PRO	C	95	38.606	57.326	68.220	1.00	40.92	C
ATOM	10474	CG	PRO	C	95	38.406	58.340	67.337	1.00	43.30	C
ATOM	10477	CD	PRO	C	95	37.050	58.218	66.504	1.00	45.08	C
ATOM	10480	C	PRO	C	95	36.737	55.730	68.741	1.00	37.51	C
ATOM	10481	O	PRO	C	95	35.826	56.513	68.897	1.00	40.73	O
ATOM	10482	N	THR	C	96	36.836	54.564	69.340	1.00	35.57	N
ATOM	10484	CA	THR	C	96	36.133	54.302	70.597	1.00	35.67	C
ATOM	10486	CB	THR	C	96	36.506	52.995	71.300	1.00	34.47	C
ATOM	10488	OG1	THR	C	96	36.874	52.031	70.376	1.00	40.36	O
ATOM	10490	CG2	THR	C	96	35.298	52.345	71.897	1.00	34.45	C
ATOM	10494	C	THR	C	96	36.545	55.342	71.633	1.00	37.15	C
ATOM	10495	O	THR	C	96	37.697	55.771	71.699	1.00	38.19	O
ATOM	10496	N	THR	C	97	35.597	55.641	72.520	1.00	37.17	N
ATOM	10498	CA	THR	C	97	35.688	56.759	73.381	1.00	37.73	C
ATOM	10500	CB	THR	C	97	34.989	57.870	72.675	1.00	39.59	C
ATOM	10502	OG1	THR	C	97	35.841	58.260	71.625	1.00	39.41	O
ATOM	10504	CG2	THR	C	97	34.957	59.110	73.454	1.00	45.48	C
ATOM	10508	C	THR	C	97	35.031	56.368	74.658	1.00	36.93	C
ATOM	10509	O	THR	C	97	34.132	55.590	74.698	1.00	36.08	O
ATOM	10510	N	PHE	C	98	35.522	56.933	75.731	1.00	38.65	N
ATOM	10512	CA	PHE	C	98	34.986	56.695	77.041	1.00	37.72	C
ATOM	10514	CB	PHE	C	98	36.159	56.124	77.902	1.00	37.47	C
ATOM	10517	CG	PHE	C	98	36.606	54.763	77.485	1.00	34.26	C
ATOM	10518	CD1	PHE	C	98	37.578	54.609	76.544	1.00	35.84	C
ATOM	10520	CE1	PHE	C	98	38.002	53.331	76.187	1.00	34.75	C
ATOM	10522	CZ	PHE	C	98	37.421	52.229	76.743	1.00	29.78	C
ATOM	10524	CE2	PHE	C	98	36.491	52.389	77.668	1.00	29.34	C
ATOM	10526	CD2	PHE	C	98	36.090	53.645	78.051	1.00	31.59	C
ATOM	10528	C	PHE	C	98	34.422	58.060	77.591	1.00	39.16	C
ATOM	10529	O	PHE	C	98	34.737	59.159	77.062	1.00	40.05	O
ATOM	10530	N	GLY	C	99	33.598	57.951	78.645	1.00	38.61	N
ATOM	10532	CA	GLY	C	99	33.116	59.091	79.423	1.00	40.58	C
ATOM	10535	C	GLY	C	99	34.047	59.347	80.600	1.00	40.69	C
ATOM	10536	O	GLY	C	99	34.881	58.511	80.838	1.00	39.99	O
ATOM	10537	N	ALA	C	100	33.936	60.467	81.318	1.00	42.29	N
ATOM	10539	CA	ALA	C	100	34.929	60.800	82.331	1.00	43.08	C
ATOM	10541	CB	ALA	C	100	34.952	62.200	82.593	1.00	45.44	C
ATOM	10545	C	ALA	C	100	34.704	60.073	83.615	1.00	43.15	C
ATOM	10546	O	ALA	C	100	35.530	60.158	84.533	1.00	46.01	O
ATOM	10547	N	GLY	C	101	33.582	59.386	83.698	1.00	42.22	N
ATOM	10549	CA	GLY	C	101	33.303	58.487	84.799	1.00	41.44	C
ATOM	10552	C	GLY	C	101	32.429	59.141	85.833	1.00	42.90	C
ATOM	10553	O	GLY	C	101	32.196	60.338	85.710	1.00	43.82	O
ATOM	10554	N	THR	C	102	31.927	58.324	86.776	1.00	42.89	N
ATOM	10556	CA	THR	C	102	31.102	58.722	87.925	1.00	44.84	C
ATOM	10558	CB	THR	C	102	29.615	58.489	87.561	1.00	45.99	C
ATOM	10560	OG1	THR	C	102	29.167	59.579	86.758	1.00	48.49	O
ATOM	10562	CG2	THR	C	102	28.616	58.548	88.759	1.00	48.28	C
ATOM	10566	C	THR	C	102	31.537	57.838	89.083	1.00	44.23	C
ATOM	10567	O	THR	C	102	31.749	56.657	88.885	1.00	43.22	O
ATOM	10568	N	LYS	C	103	31.688	58.393	90.278	1.00	45.21	N
ATOM	10570	CA	LYS	C	103	32.237	57.643	91.412	1.00	45.48	C
ATOM	10572	CB	LYS	C	103	33.267	58.475	92.288	1.00	47.73	C
ATOM	10575	CG	LYS	C	103	34.082	57.608	93.362	1.00	48.87	C
ATOM	10578	CD	LYS	C	103	35.298	58.255	93.982	1.00	53.95	C
ATOM	10581	CE	LYS	C	103	35.376	58.007	95.634	1.00	64.04	C
ATOM	10584	NZ	LYS	C	103	34.907	59.016	96.915	1.00	61.58	N
ATOM	10588	C	LYS	C	103	31.069	57.287	92.237	1.00	46.12	C
ATOM	10589	O	LYS	C	103	30.196	58.112	92.468	1.00	48.00	O
ATOM	10590	N	LEU	C	104	31.042	56.098	92.776	1.00	46.17	N
ATOM	10592	CA	LEU	C	104	29.904	55.784	93.608	1.00	49.29	C
ATOM	10594	CB	LEU	C	104	29.523	54.342	93.380	1.00	49.15	C
ATOM	10597	CG	LEU	C	104	28.282	53.863	94.082	1.00	53.47	C
ATOM	10599	CD1	LEU	C	104	27.166	54.601	93.392	1.00	56.73	C

ATOM 10603	CD2	LEU	C	104	28.068	52.313	94.003	1.00	54.16	C
ATOM 10607	C	LEU	C	104	30.351	55.941	94.993	1.00	51.44	C
ATOM 10608	O	LEU	C	104	31.362	55.356	95.326	1.00	53.07	O
ATOM 10609	N	GLU	C	105	29.662	56.720	95.796	1.00	53.36	N
ATOM 10611	CA	GLU	C	105	29.914	56.710	97.228	1.00	56.53	C
ATOM 10613	CB	GLU	C	105	30.270	58.104	97.697	1.00	58.68	C
ATOM 10616	CG	GLU	C	105	30.158	58.333	99.212	1.00	63.77	C
ATOM 10619	CD	GLU	C	105	30.265	59.803	99.573	1.00	68.90	C
ATOM 10620	OE1	GLU	C	105	29.358	60.563	99.176	1.00	72.30	O
ATOM 10621	OE2	GLU	C	105	31.249	60.206	100.245	1.00	72.61	O
ATOM 10622	C	GLU	C	105	28.705	56.246	98.031	1.00	58.76	C
ATOM 10623	O	GLU	C	105	27.599	56.744	97.824	1.00	59.09	O
ATOM 10624	N	LEU	C	106	28.930	55.327	98.977	1.00	60.31	N
ATOM 10626	CA	LEU	C	106	27.904	54.929	99.963	1.00	62.77	C
ATOM 10628	CB	LEU	C	106	28.333	53.678	100.722	1.00	64.45	C
ATOM 10631	CG	LEU	C	106	28.259	52.375	99.937	1.00	64.30	C
ATOM 10633	CD1	LEU	C	106	28.586	51.154	100.833	1.00	67.13	C
ATOM 10637	CD2	LEU	C	106	26.847	52.259	99.368	1.00	66.90	C
ATOM 10641	C	LEU	C	106	27.715	55.987	100.994	1.00	64.27	C
ATOM 10642	O	LEU	C	106	28.692	56.430	101.558	1.00	63.86	O
ATOM 10643	N	LYS	C	107	26.474	56.364	101.274	1.00	65.47	N
ATOM 10645	CA	LYS	C	107	26.248	57.151	102.447	1.00	68.21	C
ATOM 10647	CB	LYS	C	107	25.055	58.121	102.387	1.00	70.02	C
ATOM 10650	CG	LYS	C	107	24.467	58.503	101.031	1.00	69.45	C
ATOM 10653	CD	LYS	C	107	23.340	59.617	101.174	1.00	75.00	C
ATOM 10656	CE	LYS	C	107	21.839	59.052	101.327	1.00	80.27	C
ATOM 10659	NZ	LYS	C	107	21.257	58.305	100.105	1.00	78.29	N
ATOM 10663	C	LYS	C	107	26.191	56.193	103.612	1.00	70.40	C
ATOM 10664	O	LYS	C	107	26.242	54.991	103.448	1.00	69.16	O
ATOM 10665	N	ARG	C	108	26.094	56.784	104.795	1.00	55.67	N
ATOM 10667	CA	ARG	C	108	26.552	56.234	106.070	1.00	55.57	C
ATOM 10669	CB	ARG	C	108	28.060	56.047	105.949	1.00	55.68	C
ATOM 10672	CG	ARG	C	108	28.725	55.336	107.046	1.00	56.83	C
ATOM 10675	CD	ARG	C	108	29.579	56.238	107.866	1.00	57.77	C
ATOM 10678	NE	ARG	C	108	29.552	55.864	109.288	1.00	57.84	N
ATOM 10680	CZ	ARG	C	108	30.316	54.919	109.761	1.00	60.59	C
ATOM 10681	NH1	ARG	C	108	31.146	54.248	108.965	1.00	62.42	N
ATOM 10684	NH2	ARG	C	108	30.258	54.623	111.020	1.00	64.86	N
ATOM 10687	C	ARG	C	108	26.229	57.307	107.130	1.00	54.10	C
ATOM 10688	O	ARG	C	108	26.110	58.500	106.783	1.00	52.40	O
ATOM 10689	N	THR	C	109	26.067	56.911	108.401	1.00	55.56	N
ATOM 10691	CA	THR	C	109	25.907	57.934	109.458	1.00	56.08	C
ATOM 10693	CB	THR	C	109	25.537	57.387	110.847	1.00	58.53	C
ATOM 10695	OG1	THR	C	109	26.528	56.464	111.278	1.00	58.94	O
ATOM 10697	CG2	THR	C	109	24.244	56.654	110.836	1.00	60.67	C
ATOM 10701	C	THR	C	109	27.167	58.773	109.655	1.00	54.85	C
ATOM 10702	O	THR	C	109	28.294	58.337	109.480	1.00	54.01	O
ATOM 10703	N	VAL	C	110	26.945	59.997	110.058	1.00	55.32	N
ATOM 10705	CA	VAL	C	110	28.021	60.900	110.341	1.00	55.05	C
ATOM 10707	CB	VAL	C	110	27.434	62.253	110.890	1.00	56.58	C
ATOM 10709	CG1	VAL	C	110	28.528	63.180	111.294	1.00	57.91	C
ATOM 10713	CG2	VAL	C	110	26.507	62.970	109.873	1.00	55.27	C
ATOM 10717	C	VAL	C	110	28.999	60.194	111.343	1.00	56.38	C
ATOM 10718	O	VAL	C	110	28.608	59.690	112.392	1.00	57.15	O
ATOM 10719	N	ALA	C	111	30.277	60.109	110.979	1.00	56.38	N
ATOM 10721	CA	ALA	C	111	31.305	59.519	111.847	1.00	57.80	C
ATOM 10723	CB	ALA	C	111	31.851	58.283	111.228	1.00	57.81	C
ATOM 10727	C	ALA	C	111	32.433	60.527	112.064	1.00	57.43	C
ATOM 10728	O	ALA	C	111	33.114	60.930	111.134	1.00	55.47	O
ATOM 10729	N	ALA	C	112	32.619	60.918	113.317	1.00	59.73	N
ATOM 10731	CA	ALA	C	112	33.580	61.947	113.670	1.00	59.71	C
ATOM 10733	CB	ALA	C	112	33.324	62.564	115.064	1.00	61.97	C
ATOM 10737	C	ALA	C	112	34.938	61.327	113.593	1.00	59.10	C
ATOM 10738	O	ALA	C	112	35.109	60.135	113.881	1.00	60.02	O
ATOM 10739	N	PRO	C	113	35.869	62.147	113.125	1.00	57.92	N
ATOM 10740	CA	PRO	C	113	37.241	61.752	112.972	1.00	57.27	C
ATOM 10742	CB	PRO	C	113	37.830	62.929	112.166	1.00	56.41	C
ATOM 10745	CG	PRO	C	113	37.022	64.097	112.509	1.00	56.68	C

ATOM 10748	CD	PRO	C	113	35.676	63.541	112.663	1.00	57.56	C
ATOM 10751	C	PRO	C	113	37.884	61.697	114.306	1.00	59.38	C
ATOM 10752	O	PRO	C	113	37.599	62.541	115.106	1.00	61.02	O
ATOM 10753	N	SER	C	114	38.761	60.740	114.498	1.00	59.86	N
ATOM 10755	CA	SER	C	114	39.630	60.699	115.606	1.00	62.67	C
ATOM 10757	CB	SER	C	114	39.923	59.236	115.876	1.00	64.64	C
ATOM 10760	OG	SER	C	114	38.718	58.528	116.164	1.00	66.40	O
ATOM 10762	C	SER	C	114	40.876	61.455	115.164	1.00	62.27	C
ATOM 10763	O	SER	C	114	41.536	61.049	114.215	1.00	61.52	O
ATOM 10764	N	VAL	C	115	41.212	62.536	115.849	1.00	64.21	N
ATOM 10766	CA	VAL	C	115	42.412	63.338	115.568	1.00	64.84	C
ATOM 10768	CB	VAL	C	115	42.112	64.867	115.740	1.00	66.16	C
ATOM 10770	CG1	VAL	C	115	43.187	65.745	115.105	1.00	65.30	C
ATOM 10774	CG2	VAL	C	115	40.751	65.225	115.112	1.00	65.65	C
ATOM 10778	C	VAL	C	115	43.656	62.979	116.413	1.00	67.80	C
ATOM 10779	O	VAL	C	115	43.555	62.609	117.547	1.00	71.74	O
ATOM 10780	N	PHE	C	116	44.834	63.156	115.822	1.00	67.72	N
ATOM 10782	CA	PHE	C	116	46.130	62.702	116.329	1.00	69.88	C
ATOM 10784	CB	PHE	C	116	46.381	61.247	115.944	1.00	69.43	C
ATOM 10787	CG	PHE	C	116	45.304	60.316	116.387	1.00	69.98	C
ATOM 10788	CD1	PHE	C	116	44.217	60.065	115.575	1.00	66.04	C
ATOM 10790	CE1	PHE	C	116	43.240	59.211	115.989	1.00	68.00	C
ATOM 10792	CZ	PHE	C	116	43.309	58.597	117.221	1.00	71.83	C
ATOM 10794	CE2	PHE	C	116	44.367	58.840	118.040	1.00	75.85	C
ATOM 10796	CD2	PHE	C	116	45.367	59.710	117.630	1.00	74.09	C
ATOM 10798	C	PHE	C	116	47.217	63.542	115.687	1.00	69.39	C
ATOM 10799	O	PHE	C	116	47.290	63.629	114.457	1.00	67.03	O
ATOM 10800	N	ILE	C	117	48.055	64.175	116.502	1.00	72.96	N
ATOM 10802	CA	ILE	C	117	49.120	65.045	115.980	1.00	72.96	C
ATOM 10804	CB	ILE	C	117	49.000	66.482	116.565	1.00	74.87	C
ATOM 10806	CG1	ILE	C	117	50.181	67.350	116.111	1.00	76.75	C
ATOM 10809	CD1	ILE	C	117	49.855	68.819	115.887	1.00	77.88	C
ATOM 10813	CG2	ILE	C	117	48.837	66.451	118.062	1.00	79.54	C
ATOM 10817	C	ILE	C	117	50.458	64.376	116.247	1.00	75.27	C
ATOM 10818	O	ILE	C	117	50.557	63.617	117.210	1.00	79.55	O
ATOM 10819	N	PHE	C	118	51.457	64.596	115.387	1.00	74.30	N
ATOM 10821	CA	PHE	C	118	52.774	63.940	115.508	1.00	76.66	C
ATOM 10823	CB	PHE	C	118	52.929	62.877	114.426	1.00	74.55	C
ATOM 10826	CG	PHE	C	118	51.971	61.709	114.544	1.00	74.34	C
ATOM 10827	CD1	PHE	C	118	50.831	61.640	113.735	1.00	73.64	C
ATOM 10829	CE1	PHE	C	118	49.942	60.536	113.815	1.00	71.90	C
ATOM 10831	CZ	PHE	C	118	50.239	59.516	114.666	1.00	72.99	C
ATOM 10833	CE2	PHE	C	118	51.383	59.572	115.442	1.00	74.93	C
ATOM 10835	CD2	PHE	C	118	52.232	60.651	115.391	1.00	74.47	C
ATOM 10837	C	PHE	C	118	53.975	64.915	115.393	1.00	78.41	C
ATOM 10838	O	PHE	C	118	54.268	65.444	114.286	1.00	76.97	O
ATOM 10839	N	PRO	C	119	54.675	65.181	116.500	1.00	82.21	N
ATOM 10840	CA	PRO	C	119	55.920	65.957	116.393	1.00	84.25	C
ATOM 10842	CB	PRO	C	119	56.542	65.838	117.779	1.00	88.82	C
ATOM 10845	CG	PRO	C	119	55.382	65.517	118.696	1.00	89.91	C
ATOM 10848	CD	PRO	C	119	54.374	64.797	117.892	1.00	85.44	C
ATOM 10851	C	PRO	C	119	56.828	65.320	115.316	1.00	82.79	C
ATOM 10852	O	PRO	C	119	56.648	64.125	114.994	1.00	82.06	O
ATOM 10853	N	PRO	C	120	57.709	66.107	114.711	1.00	82.76	N
ATOM 10854	CA	PRO	C	120	58.752	65.563	113.838	1.00	82.28	C
ATOM 10856	CB	PRO	C	120	59.444	66.815	113.282	1.00	82.97	C
ATOM 10859	CG	PRO	C	120	59.057	67.942	114.183	1.00	85.25	C
ATOM 10862	CD	PRO	C	120	57.728	67.580	114.747	1.00	84.01	C
ATOM 10865	C	PRO	C	120	59.749	64.678	114.568	1.00	85.50	C
ATOM 10866	O	PRO	C	120	60.140	64.963	115.715	1.00	90.03	O
ATOM 10867	N	SER	C	121	60.184	63.637	113.886	1.00	84.53	N
ATOM 10869	CA	SER	C	121	61.025	62.639	114.484	1.00	88.74	C
ATOM 10871	CB	SER	C	121	60.927	61.392	113.675	1.00	87.48	C
ATOM 10874	OG	SER	C	121	61.718	61.641	112.529	1.00	88.53	O
ATOM 10876	C	SER	C	121	62.513	63.037	114.538	1.00	92.58	C
ATOM 10877	O	SER	C	121	62.974	63.943	113.830	1.00	92.02	O
ATOM 10878	N	ASP	C	122	63.254	62.310	115.374	1.00	96.87	N
ATOM 10880	CA	ASP	C	122	64.668	62.564	115.636	1.00	100.88	C

ATOM 10882	CB	ASP	C	122	65.212	61.403	116.516	1.00106.35	C
ATOM 10885	CG	ASP	C	122	64.930	61.583	118.022	1.00110.21	C
ATOM 10886	OD1	ASP	C	122	63.991	62.303	118.397	1.00109.83	O
ATOM 10887	OD2	ASP	C	122	65.610	61.032	118.913	1.00115.97	O
ATOM 10888	C	ASP	C	122	65.523	62.705	114.353	1.00 99.41	C
ATOM 10889	O	ASP	C	122	65.919	63.808	113.992	1.00 97.33	O
ATOM 10890	N	GLU	C	123	65.761	61.552	113.698	1.00 99.99	N
ATOM 10892	CA	GLU	C	123	66.475	61.402	112.414	1.00 99.67	C
ATOM 10894	CB	GLU	C	123	66.175	60.022	111.737	1.00 98.14	C
ATOM 10901	C	GLU	C	123	66.137	62.569	111.477	1.00 96.68	C
ATOM 10902	O	GLU	C	123	67.038	63.239	110.987	1.00 98.14	O
ATOM 10903	N	GLN	C	124	64.841	62.842	111.273	1.00 93.61	N
ATOM 10905	CA	GLN	C	124	64.398	63.880	110.305	1.00 90.64	C
ATOM 10907	CB	GLN	C	124	62.846	63.927	110.138	1.00 86.51	C
ATOM 10910	CG	GLN	C	124	62.362	64.800	108.958	1.00 82.22	C
ATOM 10913	CD	GLN	C	124	60.869	65.118	108.916	1.00 78.52	C
ATOM 10914	OE1	GLN	C	124	60.108	64.980	109.888	1.00 75.18	O
ATOM 10915	NE2	GLN	C	124	60.451	65.558	107.759	1.00 77.75	N
ATOM 10918	C	GLN	C	124	64.956	65.278	110.658	1.00 92.63	C
ATOM 10919	O	GLN	C	124	65.541	65.966	109.784	1.00 92.86	O
ATOM 10920	N	LEU	C	125	64.788	65.691	111.917	1.00 94.07	N
ATOM 10922	CA	LEU	C	125	65.326	66.981	112.331	1.00 96.57	C
ATOM 10924	CB	LEU	C	125	64.896	67.338	113.755	1.00 98.49	C
ATOM 10927	CG	LEU	C	125	63.933	68.526	113.913	1.00 97.09	C
ATOM 10929	CD1	LEU	C	125	62.846	68.157	114.932	1.00 96.51	C
ATOM 10933	CD2	LEU	C	125	64.671	69.836	114.312	1.00 99.62	C
ATOM 10937	C	LEU	C	125	66.857	66.986	112.192	1.00100.24	C
ATOM 10938	O	LEU	C	125	67.463	68.054	112.104	1.00102.53	O
ATOM 10939	N	LYS	C	126	67.467	65.794	112.178	1.00101.49	N
ATOM 10941	CA	LYS	C	126	68.902	65.655	111.893	1.00105.04	C
ATOM 10943	CB	LYS	C	126	69.455	64.271	112.318	1.00107.49	C
ATOM 10950	C	LYS	C	126	69.171	65.943	110.397	1.00103.41	C
ATOM 10951	O	LYS	C	126	70.085	66.726	110.076	1.00106.04	O
ATOM 10952	N	SER	C	127	68.371	65.337	109.510	1.00 99.35	N
ATOM 10954	CA	SER	C	127	68.423	65.607	108.082	1.00 97.89	C
ATOM 10956	CB	SER	C	127	67.356	64.775	107.347	1.00 95.15	C
ATOM 10959	OG	SER	C	127	66.142	65.501	107.072	1.00 92.42	O
ATOM 10961	C	SER	C	127	68.227	67.087	107.758	1.00 97.29	C
ATOM 10962	O	SER	C	127	68.571	67.510	106.671	1.00 97.87	O
ATOM 10963	N	GLY	C	128	67.655	67.860	108.685	1.00 96.84	N
ATOM 10965	CA	GLY	C	128	67.451	69.292	108.505	1.00 97.37	C
ATOM 10968	C	GLY	C	128	66.058	69.738	108.039	1.00 94.13	C
ATOM 10969	O	GLY	C	128	65.832	70.917	107.753	1.00 94.42	O
ATOM 10970	N	THR	C	129	65.093	68.828	107.976	1.00 91.09	N
ATOM 10972	CA	THR	C	129	63.711	69.278	107.773	1.00 88.29	C
ATOM 10974	CB	THR	C	129	63.245	68.917	106.341	1.00 86.24	C
ATOM 10976	OG1	THR	C	129	64.353	69.086	105.439	1.00 88.83	O
ATOM 10978	CG2	THR	C	129	62.258	69.966	105.811	1.00 85.12	C
ATOM 10982	C	THR	C	129	62.732	68.840	108.882	1.00 86.18	C
ATOM 10983	O	THR	C	129	63.036	67.960	109.684	1.00 87.16	O
ATOM 10984	N	ALA	C	130	61.593	69.530	108.955	1.00 84.15	N
ATOM 10986	CA	ALA	C	130	60.525	69.238	109.908	1.00 81.98	C
ATOM 10988	CB	ALA	C	130	60.318	70.399	110.827	1.00 84.47	C
ATOM 10992	C	ALA	C	130	59.244	68.958	109.157	1.00 78.03	C
ATOM 10993	O	ALA	C	130	58.773	69.810	108.392	1.00 76.36	O
ATOM 10994	N	SER	C	131	58.708	67.749	109.369	1.00 76.12	N
ATOM 10996	CA	SER	C	131	57.410	67.320	108.816	1.00 72.65	C
ATOM 10998	CB	SER	C	131	57.553	66.111	107.877	1.00 70.72	C
ATOM 11001	OG	SER	C	131	57.712	66.485	106.501	1.00 70.02	O
ATOM 11003	C	SER	C	131	56.496	66.992	110.011	1.00 72.77	C
ATOM 11004	O	SER	C	131	56.814	66.125	110.855	1.00 74.28	O
ATOM 11005	N	VAL	C	132	55.378	67.710	110.105	1.00 71.88	N
ATOM 11007	CA	VAL	C	132	54.471	67.565	111.239	1.00 72.03	C
ATOM 11009	CB	VAL	C	132	54.174	68.881	111.954	1.00 73.84	C
ATOM 11011	CG1	VAL	C	132	53.490	68.605	113.281	1.00 75.05	C
ATOM 11015	CG2	VAL	C	132	55.443	69.693	112.128	1.00 77.41	C
ATOM 11019	C	VAL	C	132	53.191	67.089	110.658	1.00 69.08	C
ATOM 11020	O	VAL	C	132	52.743	67.657	109.685	1.00 67.17	O

ATOM	11021	N	VAL	C	133	52.591	66.083	111.287	1.00	68.84	N
ATOM	11023	CA	VAL	C	133	51.465	65.357	110.700	1.00	66.13	C
ATOM	11025	CB	VAL	C	133	51.861	63.890	110.444	1.00	66.16	C
ATOM	11027	CG1	VAL	C	133	50.771	63.077	109.757	1.00	62.31	C
ATOM	11031	CG2	VAL	C	133	53.162	63.852	109.672	1.00	68.50	C
ATOM	11035	C	VAL	C	133	50.262	65.317	111.596	1.00	66.14	C
ATOM	11036	O	VAL	C	133	50.346	65.030	112.772	1.00	68.15	O
ATOM	11037	N	CYS	C	134	49.125	65.563	110.990	1.00	64.89	N
ATOM	11039	CA	CYS	C	134	47.844	65.261	111.575	1.00	64.95	C
ATOM	11041	CB	CYS	C	134	46.938	66.457	111.408	1.00	65.26	C
ATOM	11044	SG	CYS	C	134	46.037	66.697	112.941	1.00	72.19	S
ATOM	11045	C	CYS	C	134	47.197	64.094	110.858	1.00	62.06	C
ATOM	11046	O	CYS	C	134	47.449	63.862	109.674	1.00	61.20	O
ATOM	11047	N	LEU	C	135	46.337	63.380	111.568	1.00	61.40	N
ATOM	11049	CA	LEU	C	135	45.617	62.235	111.027	1.00	58.71	C
ATOM	11051	CB	LEU	C	135	46.183	60.986	111.655	1.00	60.46	C
ATOM	11054	CG	LEU	C	135	45.430	59.670	111.520	1.00	61.31	C
ATOM	11056	CD1	LEU	C	135	45.114	59.308	110.103	1.00	60.36	C
ATOM	11060	CD2	LEU	C	135	46.276	58.559	112.078	1.00	63.76	C
ATOM	11064	C	LEU	C	135	44.221	62.435	111.468	1.00	57.46	C
ATOM	11065	O	LEU	C	135	43.984	62.674	112.610	1.00	58.68	O
ATOM	11066	N	LEU	C	136	43.282	62.449	110.566	1.00	56.07	N
ATOM	11068	CA	LEU	C	136	41.871	62.381	110.951	1.00	56.20	C
ATOM	11070	CB	LEU	C	136	41.019	63.385	110.192	1.00	54.74	C
ATOM	11073	CG	LEU	C	136	41.477	64.822	109.904	1.00	55.75	C
ATOM	11075	CD1	LEU	C	136	40.252	65.754	109.846	1.00	56.08	C
ATOM	11079	CD2	LEU	C	136	42.517	65.363	110.864	1.00	57.95	C
ATOM	11083	C	LEU	C	136	41.455	60.970	110.567	1.00	56.76	C
ATOM	11084	O	LEU	C	136	41.558	60.579	109.377	1.00	54.98	O
ATOM	11085	N	ASN	C	137	41.010	60.175	111.543	1.00	59.04	N
ATOM	11087	CA	ASN	C	137	40.813	58.746	111.242	1.00	60.23	C
ATOM	11089	CB	ASN	C	137	41.551	57.792	112.223	1.00	63.94	C
ATOM	11092	CG	ASN	C	137	41.899	56.418	111.560	1.00	66.89	C
ATOM	11093	OD1	ASN	C	137	41.856	56.288	110.338	1.00	70.32	O
ATOM	11094	ND2	ASN	C	137	42.199	55.407	112.361	1.00	71.93	N
ATOM	11097	C	ASN	C	137	39.365	58.402	111.194	1.00	58.92	C
ATOM	11098	O	ASN	C	137	38.607	58.929	111.965	1.00	59.90	O
ATOM	11099	N	ASN	C	138	39.015	57.519	110.275	1.00	58.00	N
ATOM	11101	CA	ASN	C	138	37.670	56.976	110.095	1.00	57.80	C
ATOM	11103	CB	ASN	C	138	37.502	55.768	110.969	1.00	60.82	C
ATOM	11106	CG	ASN	C	138	38.594	54.763	110.761	1.00	63.86	C
ATOM	11107	OD1	ASN	C	138	39.038	54.501	109.625	1.00	64.97	O
ATOM	11108	ND2	ASN	C	138	39.057	54.201	111.853	1.00	67.79	N
ATOM	11111	C	ASN	C	138	36.531	57.965	110.296	1.00	56.57	C
ATOM	11112	O	ASN	C	138	35.732	57.824	111.235	1.00	57.27	O
ATOM	11113	N	PHE	C	139	36.479	58.985	109.420	1.00	54.48	N
ATOM	11115	CA	PHE	C	139	35.331	59.891	109.404	1.00	53.81	C
ATOM	11117	CB	PHE	C	139	35.790	61.326	109.616	1.00	53.42	C
ATOM	11120	CG	PHE	C	139	36.608	61.856	108.508	1.00	51.95	C
ATOM	11121	CD1	PHE	C	139	36.007	62.464	107.425	1.00	50.55	C
ATOM	11123	CE1	PHE	C	139	36.768	62.941	106.395	1.00	50.36	C
ATOM	11125	CZ	PHE	C	139	38.144	62.850	106.440	1.00	48.23	C
ATOM	11127	CE2	PHE	C	139	38.739	62.256	107.503	1.00	49.74	C
ATOM	11129	CD2	PHE	C	139	37.976	61.749	108.536	1.00	50.89	C
ATOM	11131	C	PHE	C	139	34.416	59.794	108.162	1.00	52.65	C
ATOM	11132	O	PHE	C	139	34.751	59.186	107.164	1.00	50.71	O
ATOM	11133	N	TYR	C	140	33.241	60.391	108.281	1.00	52.90	N
ATOM	11135	CA	TYR	C	140	32.274	60.479	107.190	1.00	53.13	C
ATOM	11137	CB	TYR	C	140	31.467	59.199	107.034	1.00	54.47	C
ATOM	11140	CG	TYR	C	140	30.597	59.241	105.814	1.00	55.53	C
ATOM	11141	CD1	TYR	C	140	31.066	58.769	104.599	1.00	56.84	C
ATOM	11143	CE1	TYR	C	140	30.306	58.850	103.463	1.00	56.96	C
ATOM	11145	CZ	TYR	C	140	29.054	59.386	103.533	1.00	58.04	C
ATOM	11146	OH	TYR	C	140	28.331	59.472	102.372	1.00	60.87	O
ATOM	11148	CE2	TYR	C	140	28.565	59.856	104.720	1.00	57.39	C
ATOM	11150	CD2	TYR	C	140	29.344	59.792	105.851	1.00	56.47	C
ATOM	11152	C	TYR	C	140	31.327	61.564	107.646	1.00	53.37	C
ATOM	11153	O	TYR	C	140	30.973	61.600	108.799	1.00	54.87	O



ATOM	11154	N	PRO	C	141	30.932	62.477	106.799	1.00	52.72	N
ATOM	11155	CA	PRO	C	141	31.297	62.520	105.408	1.00	52.43	C
ATOM	11157	CB	PRO	C	141	30.176	63.388	104.835	1.00	53.29	C
ATOM	11160	CG	PRO	C	141	29.996	64.367	105.828	1.00	53.92	C
ATOM	11163	CD	PRO	C	141	30.119	63.638	107.168	1.00	53.63	C
ATOM	11166	C	PRO	C	141	32.700	63.141	105.142	1.00	51.46	C
ATOM	11167	O	PRO	C	141	33.371	63.582	106.018	1.00	50.16	O
ATOM	11168	N	ARG	C	142	33.106	63.171	103.880	1.00	52.37	N
ATOM	11170	CA	ARG	C	142	34.467	63.464	103.538	1.00	52.21	C
ATOM	11172	CB	ARG	C	142	34.734	63.188	102.077	1.00	53.40	C
ATOM	11175	CG	ARG	C	142	36.078	63.698	101.630	1.00	56.32	C
ATOM	11178	CD	ARG	C	142	36.554	63.071	100.360	1.00	60.42	C
ATOM	11181	NE	ARG	C	142	37.713	63.814	99.826	1.00	62.68	N
ATOM	11183	CZ	ARG	C	142	38.378	63.446	98.735	1.00	62.72	C
ATOM	11184	NH1	ARG	C	142	37.965	62.338	98.098	1.00	67.02	N
ATOM	11187	NH2	ARG	C	142	39.433	64.150	98.286	1.00	59.04	N
ATOM	11190	C	ARG	C	142	34.803	64.879	103.799	1.00	52.89	C
ATOM	11191	O	ARG	C	142	35.994	65.178	104.043	1.00	52.87	O
ATOM	11192	N	GLU	C	143	33.813	65.776	103.712	1.00	54.26	N
ATOM	11194	CA	GLU	C	143	34.158	67.175	103.987	1.00	56.18	C
ATOM	11196	CB	GLU	C	143	33.053	68.169	103.642	1.00	58.86	C
ATOM	11199	CG	GLU	C	143	33.596	69.598	103.729	1.00	63.26	C
ATOM	11202	CD	GLU	C	143	32.567	70.696	103.455	1.00	70.77	C
ATOM	11203	OE1	GLU	C	143	31.399	70.575	103.939	1.00	72.09	O
ATOM	11204	OE2	GLU	C	143	32.940	71.714	102.782	1.00	74.74	O
ATOM	11205	C	GLU	C	143	34.663	67.386	105.427	1.00	55.52	C
ATOM	11206	O	GLU	C	143	33.912	67.386	106.409	1.00	55.37	O
ATOM	11207	N	ALA	C	144	35.975	67.507	105.516	1.00	55.94	N
ATOM	11209	CA	ALA	C	144	36.665	67.970	106.712	1.00	57.00	C
ATOM	11211	CB	ALA	C	144	37.587	66.852	107.213	1.00	55.95	C
ATOM	11215	C	ALA	C	144	37.478	69.253	106.372	1.00	58.66	C
ATOM	11216	O	ALA	C	144	37.631	69.622	105.214	1.00	59.65	O
ATOM	11217	N	LYS	C	145	38.038	69.884	107.380	1.00	59.98	N
ATOM	11219	CA	LYS	C	145	38.880	71.055	107.194	1.00	62.18	C
ATOM	11221	CB	LYS	C	145	37.975	72.309	107.181	1.00	65.67	C
ATOM	11224	CG	LYS	C	145	38.627	73.759	107.072	1.00	70.00	C
ATOM	11227	CD	LYS	C	145	37.728	74.817	107.895	1.00	74.41	C
ATOM	11230	CE	LYS	C	145	37.394	76.202	107.210	1.00	78.41	C
ATOM	11233	NZ	LYS	C	145	37.443	76.330	105.690	1.00	76.16	N
ATOM	11237	C	LYS	C	145	39.948	71.077	108.306	1.00	62.49	C
ATOM	11238	O	LYS	C	145	39.714	70.784	109.493	1.00	62.13	O
ATOM	11239	N	VAL	C	146	41.152	71.415	107.909	1.00	63.00	N
ATOM	11241	CA	VAL	C	146	42.268	71.334	108.824	1.00	63.55	C
ATOM	11243	CB	VAL	C	146	43.183	70.193	108.431	1.00	61.33	C
ATOM	11245	CG1	VAL	C	146	44.510	70.267	109.248	1.00	63.03	C
ATOM	11249	CG2	VAL	C	146	42.446	68.892	108.609	1.00	58.25	C
ATOM	11253	C	VAL	C	146	43.060	72.595	108.730	1.00	66.29	C
ATOM	11254	O	VAL	C	146	43.628	72.875	107.681	1.00	66.84	O
ATOM	11255	N	GLN	C	147	43.095	73.350	109.817	1.00	68.87	N
ATOM	11257	CA	GLN	C	147	43.905	74.536	109.882	1.00	72.37	C
ATOM	11259	CB	GLN	C	147	43.099	75.734	110.396	1.00	76.83	C
ATOM	11262	CG	GLN	C	147	42.317	76.514	109.337	1.00	77.62	C
ATOM	11265	CD	GLN	C	147	41.165	77.347	109.930	1.00	80.53	C
ATOM	11266	OE1	GLN	C	147	41.367	78.499	110.283	1.00	88.62	O
ATOM	11267	NE2	GLN	C	147	39.980	76.775	110.015	1.00	74.96	N
ATOM	11270	C	GLN	C	147	45.058	74.207	110.804	1.00	72.82	C
ATOM	11271	O	GLN	C	147	44.920	73.510	111.778	1.00	71.65	O
ATOM	11272	N	TRP	C	148	46.224	74.684	110.443	1.00	74.99	N
ATOM	11274	CA	TRP	C	148	47.392	74.550	111.287	1.00	76.89	C
ATOM	11276	CB	TRP	C	148	48.588	74.068	110.465	1.00	74.83	C
ATOM	11279	CG	TRP	C	148	48.711	72.619	110.138	1.00	70.59	C
ATOM	11280	CD1	TRP	C	148	48.353	72.042	108.978	1.00	67.59	C
ATOM	11282	NE1	TRP	C	148	48.676	70.711	108.984	1.00	63.05	N
ATOM	11284	CE2	TRP	C	148	49.305	70.418	110.155	1.00	65.79	C
ATOM	11285	CD2	TRP	C	148	49.343	71.584	110.905	1.00	69.46	C
ATOM	11286	CE3	TRP	C	148	49.938	71.526	112.141	1.00	72.82	C
ATOM	11288	CZ3	TRP	C	148	50.457	70.314	112.584	1.00	71.92	C
ATOM	11290	CH2	TRP	C	148	50.410	69.202	111.822	1.00	68.74	C

ATOM	11292	CZ2	TRP	C	148	49.838	69.223	110.603	1.00	67.06	C
ATOM	11294	C	TRP	C	148	47.705	75.955	111.937	1.00	82.80	C
ATOM	11295	O	TRP	C	148	47.740	77.001	111.243	1.00	84.38	O
ATOM	11296	N	LYS	C	149	47.929	75.943	113.262	1.00	85.63	N
ATOM	11298	CA	LYS	C	149	48.203	77.147	114.050	1.00	91.54	C
ATOM	11300	CB	LYS	C	149	47.065	77.424	115.063	1.00	94.11	C
ATOM	11303	CG	LYS	C	149	45.657	77.643	114.457	1.00	92.57	C
ATOM	11306	CD	LYS	C	149	44.608	77.959	115.522	1.00	95.47	C
ATOM	11309	CE	LYS	C	149	43.170	77.612	115.088	1.00	93.07	C
ATOM	11312	NZ	LYS	C	149	42.369	76.679	116.029	1.00	90.06	N
ATOM	11316	C	LYS	C	149	49.548	76.978	114.773	1.00	93.58	C
ATOM	11317	O	LYS	C	149	49.876	75.896	115.279	1.00	91.51	O
ATOM	11318	N	VAL	C	150	50.315	78.062	114.807	1.00	97.73	N
ATOM	11320	CA	VAL	C	150	51.624	78.061	115.384	1.00	100.07	C
ATOM	11322	CB	VAL	C	150	52.631	78.262	114.275	1.00	99.22	C
ATOM	11324	CG1	VAL	C	150	54.029	78.444	114.828	1.00	104.37	C
ATOM	11328	CG2	VAL	C	150	52.601	77.096	113.333	1.00	93.65	C
ATOM	11332	C	VAL	C	150	51.629	79.233	116.329	1.00	107.01	C
ATOM	11333	O	VAL	C	150	51.874	80.369	115.916	1.00	111.28	O
ATOM	11334	N	ASP	C	151	51.334	78.985	117.600	1.00	109.29	N
ATOM	11336	CA	ASP	C	151	51.128	80.083	118.573	1.00	116.46	C
ATOM	11338	CB	ASP	C	151	52.361	81.004	118.708	1.00	121.70	C
ATOM	11341	CG	ASP	C	151	53.612	80.265	119.111	1.00	119.58	C
ATOM	11342	OD1	ASP	C	151	53.619	79.651	120.194	1.00	118.15	O
ATOM	11343	OD2	ASP	C	151	54.640	80.248	118.410	1.00	116.55	O
ATOM	11344	C	ASP	C	151	49.927	80.929	118.156	1.00	118.10	C
ATOM	11345	O	ASP	C	151	49.762	82.048	118.615	1.00	124.53	O
ATOM	11346	N	ASN	C	152	49.106	80.368	117.273	1.00	112.89	N
ATOM	11348	CA	ASN	C	152	47.884	80.991	116.737	1.00	113.81	C
ATOM	11350	CB	ASN	C	152	46.964	81.550	117.853	1.00	119.38	C
ATOM	11353	CG	ASN	C	152	46.467	80.472	118.794	1.00	117.08	C
ATOM	11354	OD1	ASN	C	152	45.498	79.741	118.489	1.00	111.65	O
ATOM	11355	ND2	ASN	C	152	47.133	80.356	119.948	1.00	119.53	N
ATOM	11358	C	ASN	C	152	48.039	82.015	115.598	1.00	115.75	C
ATOM	11359	O	ASN	C	152	47.197	82.882	115.467	1.00	119.93	O
ATOM	11360	N	ALA	C	153	49.086	81.916	114.773	1.00	113.90	N
ATOM	11362	CA	ALA	C	153	49.016	82.419	113.383	1.00	112.97	C
ATOM	11364	CB	ALA	C	153	50.362	83.049	112.914	1.00	115.78	C
ATOM	11368	C	ALA	C	153	48.582	81.215	112.489	1.00	105.40	C
ATOM	11369	O	ALA	C	153	49.190	80.118	112.536	1.00	100.44	O
ATOM	11370	N	LEU	C	154	47.490	81.404	111.738	1.00	104.22	N
ATOM	11372	CA	LEU	C	154	47.062	80.433	110.725	1.00	98.09	C
ATOM	11374	CB	LEU	C	154	45.803	80.913	109.980	1.00	99.06	C
ATOM	11377	CG	LEU	C	154	44.449	80.931	110.712	1.00	100.59	C
ATOM	11379	CD1	LEU	C	154	44.035	82.369	111.263	1.00	107.76	C
ATOM	11383	CD2	LEU	C	154	43.376	80.317	109.788	1.00	96.43	C
ATOM	11387	C	LEU	C	154	48.178	80.250	109.706	1.00	96.18	C
ATOM	11388	O	LEU	C	154	48.764	81.229	109.238	1.00	99.72	O
ATOM	11389	N	GLN	C	155	48.466	78.997	109.357	1.00	90.49	N
ATOM	11391	CA	GLN	C	155	49.477	78.703	108.346	1.00	88.65	C
ATOM	11393	CB	GLN	C	155	50.264	77.418	108.660	1.00	84.72	C
ATOM	11396	CG	GLN	C	155	51.045	77.407	109.970	1.00	85.90	C
ATOM	11399	CD	GLN	C	155	51.946	78.589	110.099	1.00	91.43	C
ATOM	11400	OE1	GLN	C	155	52.738	78.847	109.204	1.00	93.14	O
ATOM	11401	NE2	GLN	C	155	51.820	79.336	111.198	1.00	95.40	N
ATOM	11404	C	GLN	C	155	48.752	78.564	107.025	1.00	86.54	C
ATOM	11405	O	GLN	C	155	47.599	78.120	106.959	1.00	84.02	O
ATOM	11406	N	SER	C	156	49.404	78.988	105.966	1.00	87.95	N
ATOM	11408	CA	SER	C	156	48.872	78.684	104.665	1.00	86.39	C
ATOM	11410	CB	SER	C	156	47.818	79.707	104.245	1.00	89.74	C
ATOM	11413	OG	SER	C	156	48.427	80.797	103.581	1.00	95.70	O
ATOM	11415	C	SER	C	156	50.039	78.564	103.698	1.00	86.84	C
ATOM	11416	O	SER	C	156	51.075	79.207	103.873	1.00	88.72	O
ATOM	11417	N	GLY	C	157	49.867	77.656	102.735	1.00	84.26	N
ATOM	11419	CA	GLY	C	157	50.836	77.421	101.684	1.00	85.21	C
ATOM	11422	C	GLY	C	157	52.001	76.541	102.070	1.00	82.75	C
ATOM	11423	O	GLY	C	157	52.857	76.304	101.247	1.00	83.43	O
ATOM	11424	N	ASN	C	158	52.019	76.050	103.302	1.00	80.64	N

ATOM	11426	CA	ASN	C	158	53.087	75.180	103.820	1.00	79.04	C
ATOM	11428	CB	ASN	C	158	53.786	75.891	104.976	1.00	81.79	C
ATOM	11431	CG	ASN	C	158	52.797	76.357	106.077	1.00	84.07	C
ATOM	11432	OD1	ASN	C	158	51.593	76.497	105.840	1.00	85.42	O
ATOM	11433	ND2	ASN	C	158	53.315	76.578	107.292	1.00	87.62	N
ATOM	11436	C	ASN	C	158	52.554	73.770	104.259	1.00	74.13	C
ATOM	11437	O	ASN	C	158	53.185	73.076	105.074	1.00	72.30	O
ATOM	11438	N	SER	C	159	51.392	73.365	103.719	1.00	71.66	N
ATOM	11440	CA	SER	C	159	50.788	72.052	104.073	1.00	67.90	C
ATOM	11442	CB	SER	C	159	49.729	72.128	105.214	1.00	66.13	C
ATOM	11445	OG	SER	C	159	48.749	73.114	105.020	1.00	64.64	O
ATOM	11447	C	SER	C	159	50.183	71.335	102.905	1.00	66.31	C
ATOM	11448	O	SER	C	159	49.609	71.959	102.030	1.00	68.14	O
ATOM	11449	N	GLN	C	160	50.291	70.012	102.916	1.00	64.19	N
ATOM	11451	CA	GLN	C	160	49.644	69.174	101.896	1.00	62.64	C
ATOM	11453	CB	GLN	C	160	50.677	68.532	100.993	1.00	63.54	C
ATOM	11456	CG	GLN	C	160	51.374	69.456	100.096	1.00	65.64	C
ATOM	11459	CD	GLN	C	160	52.390	68.731	99.259	1.00	68.21	C
ATOM	11460	OE1	GLN	C	160	52.193	68.544	98.030	1.00	70.43	O
ATOM	11461	NE2	GLN	C	160	53.480	68.295	99.904	1.00	66.25	N
ATOM	11464	C	GLN	C	160	48.905	68.054	102.548	1.00	59.52	C
ATOM	11465	O	GLN	C	160	49.353	67.499	103.546	1.00	58.40	O
ATOM	11466	N	GLU	C	161	47.794	67.673	101.945	1.00	58.74	N
ATOM	11468	CA	GLU	C	161	47.020	66.559	102.487	1.00	56.88	C
ATOM	11470	CB	GLU	C	161	45.748	67.079	103.199	1.00	57.07	C
ATOM	11473	CG	GLU	C	161	44.936	68.196	102.543	1.00	59.02	C
ATOM	11476	CD	GLU	C	161	43.833	68.709	103.487	1.00	61.54	C
ATOM	11477	OE1	GLU	C	161	44.130	69.229	104.606	1.00	63.55	O
ATOM	11478	OE2	GLU	C	161	42.647	68.567	103.133	1.00	61.99	O
ATOM	11479	C	GLU	C	161	46.653	65.492	101.497	1.00	55.11	C
ATOM	11480	O	GLU	C	161	46.532	65.801	100.352	1.00	55.99	O
ATOM	11481	N	SER	C	162	46.556	64.230	101.937	1.00	53.99	N
ATOM	11483	CA	SER	C	162	45.689	63.253	101.252	1.00	54.45	C
ATOM	11485	CB	SER	C	162	46.338	61.980	100.687	1.00	54.88	C
ATOM	11488	OG	SER	C	162	47.640	61.877	100.980	1.00	54.80	O
ATOM	11490	C	SER	C	162	44.599	62.743	102.111	1.00	53.51	C
ATOM	11491	O	SER	C	162	44.721	62.768	103.346	1.00	53.28	O
ATOM	11492	N	VAL	C	163	43.602	62.185	101.394	1.00	53.67	N
ATOM	11494	CA	VAL	C	163	42.504	61.396	101.915	1.00	52.73	C
ATOM	11496	CB	VAL	C	163	41.162	61.948	101.478	1.00	52.14	C
ATOM	11498	CG1	VAL	C	163	40.071	61.623	102.477	1.00	52.07	C
ATOM	11502	CG2	VAL	C	163	41.242	63.407	101.328	1.00	53.45	C
ATOM	11506	C	VAL	C	163	42.564	60.049	101.289	1.00	54.59	C
ATOM	11507	O	VAL	C	163	43.085	59.875	100.212	1.00	56.88	O
ATOM	11508	N	THR	C	164	41.975	59.088	101.948	1.00	55.77	N
ATOM	11510	CA	THR	C	164	41.851	57.795	101.389	1.00	58.56	C
ATOM	11512	CB	THR	C	164	41.900	56.737	102.484	1.00	59.66	C
ATOM	11514	OG1	THR	C	164	42.914	57.079	103.426	1.00	59.99	O
ATOM	11516	CG2	THR	C	164	42.467	55.366	101.889	1.00	64.68	C
ATOM	11520	C	THR	C	164	40.566	57.687	100.624	1.00	59.35	C
ATOM	11521	O	THR	C	164	39.597	58.310	100.908	1.00	58.00	O
ATOM	11522	N	GLU	C	165	40.579	56.823	99.639	1.00	62.70	N
ATOM	11524	CA	GLU	C	165	39.368	56.246	99.108	1.00	63.98	C
ATOM	11526	CB	GLU	C	165	39.764	55.246	98.035	1.00	68.42	C
ATOM	11529	CG	GLU	C	165	40.394	55.913	96.779	1.00	74.03	C
ATOM	11532	CD	GLU	C	165	39.509	57.028	96.100	1.00	78.67	C
ATOM	11533	OE1	GLU	C	165	38.238	56.972	96.180	1.00	81.40	O
ATOM	11534	OE2	GLU	C	165	40.078	57.978	95.467	1.00	80.96	O
ATOM	11535	C	GLU	C	165	38.537	55.561	100.192	1.00	62.40	C
ATOM	11536	O	GLU	C	165	39.094	55.035	101.158	1.00	62.62	O
ATOM	11537	N	GLN	C	166	37.206	55.570	100.001	1.00	61.60	N
ATOM	11539	CA	GLN	C	166	36.190	55.023	100.958	1.00	60.28	C
ATOM	11541	CB	GLN	C	166	34.789	55.255	100.390	1.00	60.22	C
ATOM	11544	CG	GLN	C	166	33.671	54.930	101.352	1.00	60.01	C
ATOM	11547	CD	GLN	C	166	32.343	55.571	101.001	1.00	57.99	C
ATOM	11548	OE1	GLN	C	166	31.947	55.629	99.846	1.00	60.56	O
ATOM	11549	NE2	GLN	C	166	31.631	55.984	102.008	1.00	56.87	N
ATOM	11552	C	GLN	C	166	36.369	53.544	101.355	1.00	61.82	C

ATOM	11553	O	GLN	C	166	36.668	52.732	100.536	1.00	63.96	O
ATOM	11554	N	ASP	C	167	36.172	53.205	102.611	1.00	61.44	N
ATOM	11556	CA	ASP	C	167	36.546	51.900	103.107	1.00	65.73	C
ATOM	11558	CB	ASP	C	167	36.746	51.988	104.586	1.00	65.19	C
ATOM	11561	CG	ASP	C	167	37.345	50.724	105.181	1.00	72.04	C
ATOM	11562	OD1	ASP	C	167	36.669	49.640	105.326	1.00	75.74	O
ATOM	11563	OD2	ASP	C	167	38.529	50.768	105.587	1.00	76.75	O
ATOM	11564	C	ASP	C	167	35.428	50.923	102.904	1.00	69.41	C
ATOM	11565	O	ASP	C	167	34.325	51.175	103.348	1.00	68.59	O
ATOM	11566	N	SER	C	168	35.692	49.784	102.272	1.00	74.58	N
ATOM	11568	CA	SER	C	168	34.612	48.829	101.949	1.00	78.10	C
ATOM	11570	CB	SER	C	168	35.157	47.618	101.188	1.00	83.31	C
ATOM	11573	OG	SER	C	168	36.431	47.235	101.689	1.00	84.86	O
ATOM	11575	C	SER	C	168	33.831	48.435	103.227	1.00	78.77	C
ATOM	11576	O	SER	C	168	32.616	48.748	103.318	1.00	78.19	O
ATOM	11577	N	LYS	C	169	34.533	47.857	104.227	1.00	80.20	N
ATOM	11579	CA	LYS	C	169	33.923	47.466	105.543	1.00	81.36	C
ATOM	11581	CB	LYS	C	169	34.976	46.844	106.508	1.00	84.06	C
ATOM	11584	CG	LYS	C	169	35.667	45.526	106.043	1.00	90.82	C
ATOM	11587	CD	LYS	C	169	37.176	45.430	106.502	1.00	92.25	C
ATOM	11590	CE	LYS	C	169	37.919	44.219	105.925	1.00	98.14	C
ATOM	11593	NZ	LYS	C	169	37.925	43.042	106.880	1.00	104.47	N
ATOM	11597	C	LYS	C	169	33.080	48.578	106.300	1.00	76.62	C
ATOM	11598	O	LYS	C	169	31.880	48.420	106.429	1.00	77.24	O
ATOM	11599	N	ASP	C	170	33.703	49.652	106.806	1.00	72.36	N
ATOM	11601	CA	ASP	C	170	32.992	50.745	107.525	1.00	68.94	C
ATOM	11603	CB	ASP	C	170	33.753	51.190	108.779	1.00	68.28	C
ATOM	11606	CG	ASP	C	170	35.172	51.717	108.499	1.00	68.33	C
ATOM	11607	OD1	ASP	C	170	35.669	51.859	107.357	1.00	68.00	O
ATOM	11608	OD2	ASP	C	170	35.903	52.067	109.425	1.00	71.49	O
ATOM	11609	C	ASP	C	170	32.608	51.977	106.662	1.00	65.16	C
ATOM	11610	O	ASP	C	170	32.043	52.960	107.137	1.00	61.37	O
ATOM	11611	N	SER	C	171	32.914	51.881	105.374	1.00	65.83	N
ATOM	11613	CA	SER	C	171	32.547	52.884	104.369	1.00	63.62	C
ATOM	11615	CB	SER	C	171	31.104	52.585	103.921	1.00	64.50	C
ATOM	11618	OG	SER	C	171	30.278	53.545	104.481	1.00	62.30	O
ATOM	11620	C	SER	C	171	32.857	54.392	104.719	1.00	59.93	C
ATOM	11621	O	SER	C	171	32.140	55.332	104.368	1.00	58.66	O
ATOM	11622	N	THR	C	172	34.017	54.602	105.330	1.00	59.37	N
ATOM	11624	CA	THR	C	172	34.528	55.938	105.707	1.00	55.85	C
ATOM	11626	CB	THR	C	172	34.674	55.962	107.198	1.00	55.89	C
ATOM	11628	OG1	THR	C	172	35.487	57.071	107.513	1.00	59.13	O
ATOM	11630	CG2	THR	C	172	35.511	54.826	107.712	1.00	57.10	C
ATOM	11634	C	THR	C	172	35.897	56.403	105.084	1.00	53.92	C
ATOM	11635	O	THR	C	172	36.617	55.676	104.436	1.00	54.08	O
ATOM	11636	N	TYR	C	173	36.228	57.655	105.324	1.00	52.30	N
ATOM	11638	CA	TYR	C	173	37.479	58.291	104.859	1.00	51.46	C
ATOM	11640	CB	TYR	C	173	37.166	59.643	104.193	1.00	49.71	C
ATOM	11643	CG	TYR	C	173	36.218	59.481	103.061	1.00	49.79	C
ATOM	11644	CD1	TYR	C	173	34.872	59.517	103.254	1.00	49.00	C
ATOM	11646	CE1	TYR	C	173	34.033	59.333	102.222	1.00	52.19	C
ATOM	11648	CZ	TYR	C	173	34.545	59.096	100.980	1.00	53.46	C
ATOM	11649	OH	TYR	C	173	33.727	58.910	99.884	1.00	58.02	O
ATOM	11651	CE2	TYR	C	173	35.868	59.059	100.794	1.00	52.66	C
ATOM	11653	CD2	TYR	C	173	36.680	59.236	101.810	1.00	51.00	C
ATOM	11655	C	TYR	C	173	38.513	58.493	105.961	1.00	51.35	C
ATOM	11656	O	TYR	C	173	38.240	58.326	107.138	1.00	51.36	O
ATOM	11657	N	SER	C	174	39.701	58.907	105.547	1.00	51.83	N
ATOM	11659	CA	SER	C	174	40.799	59.144	106.484	1.00	52.31	C
ATOM	11661	CB	SER	C	174	41.538	57.809	106.747	1.00	54.03	C
ATOM	11664	OG	SER	C	174	41.293	57.287	108.023	1.00	52.58	O
ATOM	11666	C	SER	C	174	41.742	60.193	105.881	1.00	51.52	C
ATOM	11667	O	SER	C	174	42.203	60.034	104.801	1.00	52.07	O
ATOM	11668	N	LEU	C	175	42.048	61.249	106.587	1.00	51.86	N
ATOM	11670	CA	LEU	C	175	42.874	62.315	106.019	1.00	52.36	C
ATOM	11672	CB	LEU	C	175	42.244	63.649	106.309	1.00	51.94	C
ATOM	11675	CG	LEU	C	175	42.542	64.815	105.400	1.00	51.62	C
ATOM	11677	CD1	LEU	C	175	41.344	65.221	104.572	1.00	50.59	C

ATOM 11681	CD2	LEU	C	175	42.946	65.915	106.230	1.00	52.90	C
ATOM 11685	C	LEU	C	175	44.220	62.353	106.658	1.00	54.29	C
ATOM 11686	O	LEU	C	175	44.426	61.809	107.718	1.00	55.77	O
ATOM 11687	N	SER	C	176	45.160	63.032	106.029	1.00	55.63	N
ATOM 11689	CA	SER	C	176	46.416	63.293	106.700	1.00	56.66	C
ATOM 11691	CB	SER	C	176	47.413	62.207	106.400	1.00	57.54	C
ATOM 11694	OG	SER	C	176	48.503	62.771	105.728	1.00	61.11	O
ATOM 11696	C	SER	C	176	46.915	64.623	106.226	1.00	57.20	C
ATOM 11697	O	SER	C	176	46.943	64.902	105.017	1.00	56.36	O
ATOM 11698	N	SER	C	177	47.292	65.468	107.193	1.00	58.72	N
ATOM 11700	CA	SER	C	177	47.898	66.776	106.878	1.00	59.21	C
ATOM 11702	CB	SER	C	177	47.171	67.915	107.543	1.00	59.79	C
ATOM 11705	OG	SER	C	177	47.283	69.028	106.687	1.00	61.45	O
ATOM 11707	C	SER	C	177	49.295	66.763	107.325	1.00	59.52	C
ATOM 11708	O	SER	C	177	49.564	66.372	108.408	1.00	59.47	O
ATOM 11709	N	THR	C	178	50.183	67.147	106.438	1.00	60.76	N
ATOM 11711	CA	THR	C	178	51.600	67.208	106.743	1.00	62.63	C
ATOM 11713	CB	THR	C	178	52.400	66.234	105.865	1.00	62.33	C
ATOM 11715	OG1	THR	C	178	52.028	64.884	106.194	1.00	62.25	O
ATOM 11717	CG2	THR	C	178	53.836	66.288	106.225	1.00	63.69	C
ATOM 11721	C	THR	C	178	52.063	68.655	106.630	1.00	64.52	C
ATOM 11722	O	THR	C	178	52.212	69.231	105.532	1.00	65.27	O
ATOM 11723	N	LEU	C	179	52.186	69.261	107.800	1.00	66.36	N
ATOM 11725	CA	LEU	C	179	52.856	70.552	107.944	1.00	69.87	C
ATOM 11727	CB	LEU	C	179	52.540	71.183	109.294	1.00	71.47	C
ATOM 11730	CG	LEU	C	179	53.257	72.492	109.522	1.00	75.84	C
ATOM 11732	CD1	LEU	C	179	52.876	73.551	108.468	1.00	78.63	C
ATOM 11736	CD2	LEU	C	179	52.886	72.972	110.888	1.00	79.77	C
ATOM 11740	C	LEU	C	179	54.370	70.431	107.757	1.00	71.38	C
ATOM 11741	O	LEU	C	179	55.035	69.600	108.367	1.00	71.08	O
ATOM 11742	N	THR	C	180	54.892	71.257	106.871	1.00	73.42	N
ATOM 11744	CA	THR	C	180	56.279	71.148	106.515	1.00	75.49	C
ATOM 11746	CB	THR	C	180	56.400	70.535	105.098	1.00	74.91	C
ATOM 11748	OG1	THR	C	180	55.394	69.499	104.878	1.00	70.42	O
ATOM 11750	CG2	THR	C	180	57.757	69.818	104.953	1.00	76.14	C
ATOM 11754	C	THR	C	180	57.016	72.488	106.671	1.00	79.35	C
ATOM 11755	O	THR	C	180	56.499	73.558	106.316	1.00	80.35	O
ATOM 11756	N	LEU	C	181	58.218	72.376	107.238	1.00	81.53	N
ATOM 11758	CA	LEU	C	181	59.046	73.493	107.698	1.00	86.10	C
ATOM 11760	CB	LEU	C	181	58.626	73.845	109.107	1.00	87.52	C
ATOM 11763	CG	LEU	C	181	57.270	74.495	109.258	1.00	88.57	C
ATOM 11765	CD1	LEU	C	181	57.123	74.780	110.767	1.00	91.29	C
ATOM 11769	CD2	LEU	C	181	57.124	75.802	108.372	1.00	92.28	C
ATOM 11773	C	LEU	C	181	60.531	73.127	107.790	1.00	87.89	C
ATOM 11774	O	LEU	C	181	60.834	72.002	108.185	1.00	87.01	O
ATOM 11775	N	SER	C	182	61.451	74.058	107.498	1.00	90.99	N
ATOM 11777	CA	SER	C	182	62.872	73.750	107.637	1.00	92.84	C
ATOM 11779	CB	SER	C	182	63.746	74.837	107.014	1.00	96.46	C
ATOM 11782	OG	SER	C	182	64.103	75.790	107.977	1.00	99.90	O
ATOM 11784	C	SER	C	182	63.126	73.614	109.129	1.00	94.76	C
ATOM 11785	O	SER	C	182	62.526	74.368	109.888	1.00	96.46	O
ATOM 11786	N	LYS	C	183	63.973	72.665	109.562	1.00	95.19	N
ATOM 11788	CA	LYS	C	183	64.345	72.530	111.001	1.00	97.89	C
ATOM 11790	CB	LYS	C	183	65.603	71.666	111.218	1.00	99.64	C
ATOM 11797	C	LYS	C	183	64.651	73.848	111.670	1.00	102.52	C
ATOM 11798	O	LYS	C	183	64.684	73.922	112.904	1.00	105.22	O
ATOM 11799	N	ALA	C	184	64.965	74.851	110.850	1.00	104.32	N
ATOM 11801	CA	ALA	C	184	65.255	76.202	111.322	1.00	109.49	C
ATOM 11803	CB	ALA	C	184	65.910	76.997	110.192	1.00	111.80	C
ATOM 11807	C	ALA	C	184	64.015	76.946	111.857	1.00	109.86	C
ATOM 11808	O	ALA	C	184	64.043	77.545	112.937	1.00	113.60	O
ATOM 11809	N	ASP	C	185	62.940	76.921	111.075	1.00	106.51	N
ATOM 11811	CA	ASP	C	185	61.677	77.545	111.468	1.00	106.54	C
ATOM 11813	CB	ASP	C	185	60.662	77.485	110.312	1.00	103.12	C
ATOM 11816	CG	ASP	C	185	61.105	78.269	109.052	1.00	106.46	C
ATOM 11817	OD1	ASP	C	185	61.944	79.204	109.095	1.00	110.53	O
ATOM 11818	OD2	ASP	C	185	60.608	78.007	107.935	1.00	108.38	O
ATOM 11819	C	ASP	C	185	61.087	76.833	112.689	1.00	104.72	C

ATOM	11820	O	ASP	C	185	60.448	77.451	113.547	1.00107.05	O
ATOM	11821	N	TYR	C	186	61.307	75.525	112.758	1.00100.91	N
ATOM	11823	CA	TYR	C	186	60.650	74.704	113.761	1.00 99.44	C
ATOM	11825	CB	TYR	C	186	60.821	73.215	113.428	1.00 95.52	C
ATOM	11828	CG	TYR	C	186	60.182	72.269	114.423	1.00 94.50	C
ATOM	11829	CD1	TYR	C	186	58.820	72.302	114.676	1.00 92.95	C
ATOM	11831	CE1	TYR	C	186	58.228	71.416	115.611	1.00 92.00	C
ATOM	11833	CZ	TYR	C	186	59.018	70.511	116.287	1.00 92.21	C
ATOM	11834	OH	TYR	C	186	58.475	69.656	117.188	1.00 90.68	O
ATOM	11836	CE2	TYR	C	186	60.364	70.460	116.052	1.00 95.55	C
ATOM	11838	CD2	TYR	C	186	60.948	71.339	115.126	1.00 96.74	C
ATOM	11840	C	TYR	C	186	61.198	75.043	115.143	1.00104.67	C
ATOM	11841	O	TYR	C	186	60.414	75.165	116.098	1.00106.10	O
ATOM	11842	N	GLU	C	187	62.532	75.225	115.226	1.00107.76	N
ATOM	11844	CA	GLU	C	187	63.227	75.577	116.466	1.00112.95	C
ATOM	11846	CB	GLU	C	187	64.703	75.893	116.196	1.00115.75	C
ATOM	11853	C	GLU	C	187	62.516	76.763	117.096	1.00116.87	C
ATOM	11854	O	GLU	C	187	62.133	76.705	118.270	1.00119.20	O
ATOM	11855	N	LYS	C	188	62.254	77.785	116.272	1.00117.68	N
ATOM	11857	CA	LYS	C	188	61.806	79.119	116.728	1.00123.34	C
ATOM	11859	CB	LYS	C	188	62.258	80.186	115.693	1.00125.15	C
ATOM	11866	C	LYS	C	188	60.293	79.334	117.137	1.00122.83	C
ATOM	11867	O	LYS	C	188	59.870	80.480	117.337	1.00127.37	O
ATOM	11868	N	HIS	C	189	59.498	78.271	117.295	1.00118.14	N
ATOM	11870	CA	HIS	C	189	58.118	78.401	117.838	1.00118.23	C
ATOM	11872	CB	HIS	C	189	57.039	78.402	116.701	1.00113.37	C
ATOM	11875	CG	HIS	C	189	57.197	79.528	115.718	1.00115.83	C
ATOM	11876	ND1	HIS	C	189	56.933	80.841	116.040	1.00122.53	N
ATOM	11878	CE1	HIS	C	189	57.218	81.617	115.011	1.00123.27	C
ATOM	11880	NE2	HIS	C	189	57.650	80.854	114.025	1.00118.61	N
ATOM	11882	CD2	HIS	C	189	57.647	79.542	114.440	1.00114.31	C
ATOM	11884	C	HIS	C	189	57.835	77.295	118.865	1.00116.94	C
ATOM	11885	O	HIS	C	189	58.396	76.204	118.757	1.00114.30	O
ATOM	11886	N	LYS	C	190	56.965	77.557	119.843	1.00119.39	N
ATOM	11888	CA	LYS	C	190	56.663	76.554	120.870	1.00119.33	C
ATOM	11890	CB	LYS	C	190	56.311	77.194	122.220	1.00126.70	C
ATOM	11897	C	LYS	C	190	55.537	75.659	120.451	1.00113.38	C
ATOM	11898	O	LYS	C	190	55.777	74.497	120.119	1.00109.64	O
ATOM	11899	N	VAL	C	191	54.318	76.222	120.457	1.00113.48	N
ATOM	11901	CA	VAL	C	191	53.055	75.504	120.222	1.00108.33	C
ATOM	11903	CB	VAL	C	191	51.789	76.364	120.601	1.00110.82	C
ATOM	11905	CG1	VAL	C	191	50.492	75.634	120.279	1.00106.29	C
ATOM	11909	CG2	VAL	C	191	51.761	76.701	122.048	1.00117.81	C
ATOM	11913	C	VAL	C	191	52.932	75.172	118.762	1.00102.06	C
ATOM	11914	O	VAL	C	191	53.386	75.958	117.927	1.00101.58	O
ATOM	11915	N	TYR	C	192	52.284	74.024	118.493	1.00 97.43	N
ATOM	11917	CA	TYR	C	192	51.969	73.511	117.156	1.00 91.95	C
ATOM	11919	CB	TYR	C	192	53.046	72.561	116.731	1.00 89.41	C
ATOM	11922	CG	TYR	C	192	54.216	73.257	116.212	1.00 90.56	C
ATOM	11923	CD1	TYR	C	192	55.338	73.417	116.990	1.00 97.01	C
ATOM	11925	CE1	TYR	C	192	56.440	74.109	116.506	1.00 99.63	C
ATOM	11927	CZ	TYR	C	192	56.404	74.640	115.220	1.00 96.17	C
ATOM	11928	OH	TYR	C	192	57.487	75.340	114.715	1.00 99.78	O
ATOM	11930	CE2	TYR	C	192	55.283	74.479	114.450	1.00 90.48	C
ATOM	11932	CD2	TYR	C	192	54.194	73.817	114.961	1.00 87.27	C
ATOM	11934	C	TYR	C	192	50.653	72.713	117.135	1.00 89.66	C
ATOM	11935	O	TYR	C	192	50.545	71.644	117.772	1.00 89.20	O
ATOM	11936	N	ALA	C	193	49.684	73.192	116.352	1.00 88.28	N
ATOM	11938	CA	ALA	C	193	48.281	72.900	116.635	1.00 87.68	C
ATOM	11940	CB	ALA	C	193	47.569	74.139	117.180	1.00 91.96	C
ATOM	11944	C	ALA	C	193	47.588	72.431	115.403	1.00 83.46	C
ATOM	11945	O	ALA	C	193	47.920	72.887	114.312	1.00 83.57	O
ATOM	11946	N	CYS	C	194	46.602	71.551	115.588	1.00 81.07	N
ATOM	11948	CA	CYS	C	194	45.912	70.929	114.502	1.00 76.76	C
ATOM	11950	CB	CYS	C	194	46.244	69.455	114.509	1.00 74.32	C
ATOM	11953	SG	CYS	C	194	45.544	68.692	113.051	1.00 76.90	S
ATOM	11954	C	CYS	C	194	44.444	71.168	114.783	1.00 76.26	C
ATOM	11955	O	CYS	C	194	43.916	70.603	115.720	1.00 77.18	O

ATOM 11956	N	GLU	C	195	43.790	72.021	113.991	1.00	75.58	N
ATOM 11958	CA	GLU	C	195	42.376	72.394	114.203	1.00	75.90	C
ATOM 11960	CB	GLU	C	195	42.230	73.907	114.332	1.00	80.39	C
ATOM 11963	CG	GLU	C	195	40.824	74.381	114.736	1.00	83.63	C
ATOM 11966	CD	GLU	C	195	40.380	75.689	114.059	1.00	87.24	C
ATOM 11967	OE1	GLU	C	195	41.166	76.308	113.301	1.00	87.78	O
ATOM 11968	OE2	GLU	C	195	39.230	76.118	114.284	1.00	89.97	O
ATOM 11969	C	GLU	C	195	41.369	71.845	113.145	1.00	71.74	C
ATOM 11970	O	GLU	C	195	41.127	72.413	112.070	1.00	70.64	O
ATOM 11971	N	VAL	C	196	40.744	70.741	113.531	1.00	69.55	N
ATOM 11973	CA	VAL	C	196	39.805	70.023	112.708	1.00	65.72	C
ATOM 11975	CB	VAL	C	196	39.792	68.572	113.122	1.00	63.49	C
ATOM 11977	CG1	VAL	C	196	38.864	67.812	112.277	1.00	60.95	C
ATOM 11981	CG2	VAL	C	196	41.195	67.993	113.025	1.00	62.64	C
ATOM 11985	C	VAL	C	196	38.388	70.591	112.830	1.00	66.93	C
ATOM 11986	O	VAL	C	196	37.907	70.990	113.890	1.00	68.84	O
ATOM 11987	N	THR	C	197	37.727	70.587	111.693	1.00	65.22	N
ATOM 11989	CA	THR	C	197	36.375	71.068	111.555	1.00	66.67	C
ATOM 11991	CB	THR	C	197	36.395	72.420	110.849	1.00	68.91	C
ATOM 11993	OG1	THR	C	197	37.268	73.302	111.567	1.00	73.48	O
ATOM 11995	CG2	THR	C	197	35.026	73.088	110.862	1.00	70.65	C
ATOM 11999	C	THR	C	197	35.623	70.042	110.718	1.00	64.04	C
ATOM 12000	O	THR	C	197	36.033	69.666	109.600	1.00	62.98	O
ATOM 12001	N	HIS	C	198	34.511	69.574	111.243	1.00	64.16	N
ATOM 12003	CA	HIS	C	198	33.842	68.464	110.617	1.00	61.33	C
ATOM 12005	CB	HIS	C	198	34.562	67.151	110.973	1.00	59.74	C
ATOM 12008	CG	HIS	C	198	33.971	65.964	110.287	1.00	58.02	C
ATOM 12009	ND1	HIS	C	198	34.128	65.750	108.936	1.00	57.39	N
ATOM 12011	CE1	HIS	C	198	33.441	64.677	108.594	1.00	56.71	C
ATOM 12013	NE2	HIS	C	198	32.826	64.208	109.663	1.00	54.74	N
ATOM 12015	CD2	HIS	C	198	33.140	64.993	110.736	1.00	55.73	C
ATOM 12017	C	HIS	C	198	32.439	68.464	111.115	1.00	62.12	C
ATOM 12018	O	HIS	C	198	32.191	68.978	112.181	1.00	65.48	O
ATOM 12019	N	GLN	C	199	31.529	67.905	110.337	1.00	60.45	N
ATOM 12021	CA	GLN	C	199	30.113	67.879	110.673	1.00	61.89	C
ATOM 12023	CB	GLN	C	199	29.321	67.205	109.531	1.00	60.84	C
ATOM 12026	CG	GLN	C	199	27.791	67.469	109.465	1.00	62.62	C
ATOM 12029	CD	GLN	C	199	27.118	66.758	108.272	1.00	62.17	C
ATOM 12030	OE1	GLN	C	199	27.603	66.780	107.132	1.00	62.44	O
ATOM 12031	NE2	GLN	C	199	26.021	66.130	108.541	1.00	62.82	N
ATOM 12034	C	GLN	C	199	29.881	67.134	111.977	1.00	62.72	C
ATOM 12035	O	GLN	C	199	28.947	67.431	112.702	1.00	64.57	O
ATOM 12036	N	GLY	C	200	30.759	66.186	112.294	1.00	61.62	N
ATOM 12038	CA	GLY	C	200	30.553	65.315	113.435	1.00	62.79	C
ATOM 12041	C	GLY	C	200	31.172	65.785	114.730	1.00	65.81	C
ATOM 12042	O	GLY	C	200	31.463	64.929	115.553	1.00	68.31	O
ATOM 12043	N	LEU	C	201	31.378	67.103	114.910	1.00	67.08	N
ATOM 12045	CA	LEU	C	201	32.111	67.693	116.042	1.00	69.26	C
ATOM 12047	CB	LEU	C	201	33.565	67.903	115.686	1.00	67.39	C
ATOM 12050	CG	LEU	C	201	34.388	66.703	115.257	1.00	64.11	C
ATOM 12052	CD1	LEU	C	201	35.552	67.128	114.421	1.00	62.77	C
ATOM 12056	CD2	LEU	C	201	34.886	65.911	116.436	1.00	66.42	C
ATOM 12060	C	LEU	C	201	31.490	69.063	116.339	1.00	73.17	C
ATOM 12061	O	LEU	C	201	31.436	69.928	115.455	1.00	72.65	O
ATOM 12062	N	SER	C	202	31.017	69.270	117.568	1.00	77.26	N
ATOM 12064	CA	SER	C	202	30.015	70.328	117.787	1.00	81.12	C
ATOM 12066	CB	SER	C	202	29.362	70.258	119.187	1.00	85.90	C
ATOM 12069	OG	SER	C	202	29.672	69.042	119.838	1.00	85.41	O
ATOM 12071	C	SER	C	202	30.667	71.668	117.561	1.00	82.89	C
ATOM 12072	O	SER	C	202	30.102	72.570	116.969	1.00	83.10	O
ATOM 12073	N	SER	C	203	31.868	71.774	118.085	1.00	84.21	N
ATOM 12075	CA	SER	C	203	32.746	72.851	117.732	1.00	86.10	C
ATOM 12077	CB	SER	C	203	32.963	73.783	118.912	1.00	92.36	C
ATOM 12080	OG	SER	C	203	33.402	73.025	120.003	1.00	93.55	O
ATOM 12082	C	SER	C	203	34.044	72.186	117.323	1.00	83.05	C
ATOM 12083	O	SER	C	203	34.262	70.983	117.626	1.00	81.22	O
ATOM 12084	N	PRO	C	204	34.873	72.948	116.593	1.00	82.81	N
ATOM 12085	CA	PRO	C	204	36.239	72.533	116.233	1.00	79.98	C

ATOM	12087	CB	PRO	C	204	36.927	73.854	115.863	1.00	82.52	C
ATOM	12090	CG	PRO	C	204	35.815	74.803	115.476	1.00	85.07	C
ATOM	12093	CD	PRO	C	204	34.522	74.253	115.995	1.00	85.30	C
ATOM	12096	C	PRO	C	204	37.021	71.856	117.358	1.00	80.67	C
ATOM	12097	O	PRO	C	204	36.880	72.153	118.548	1.00	85.19	O
ATOM	12098	N	VAL	C	205	37.859	70.933	116.950	1.00	76.65	N
ATOM	12100	CA	VAL	C	205	38.675	70.224	117.872	1.00	77.69	C
ATOM	12102	CB	VAL	C	205	38.367	68.781	117.787	1.00	74.45	C
ATOM	12104	CG1	VAL	C	205	39.541	67.929	118.243	1.00	74.59	C
ATOM	12108	CG2	VAL	C	205	37.123	68.551	118.602	1.00	76.84	C
ATOM	12112	C	VAL	C	205	40.101	70.505	117.535	1.00	77.92	C
ATOM	12113	O	VAL	C	205	40.492	70.477	116.391	1.00	75.11	O
ATOM	12114	N	THR	C	206	40.873	70.789	118.566	1.00	82.28	N
ATOM	12116	CA	THR	C	206	42.253	71.122	118.415	1.00	82.99	C
ATOM	12118	CB	THR	C	206	42.454	72.498	118.958	1.00	88.12	C
ATOM	12120	OG1	THR	C	206	41.528	73.357	118.281	1.00	89.49	O
ATOM	12122	CG2	THR	C	206	43.880	73.065	118.602	1.00	88.94	C
ATOM	12126	C	THR	C	206	43.102	70.134	119.141	1.00	83.61	C
ATOM	12127	O	THR	C	206	42.741	69.648	120.193	1.00	86.65	O
ATOM	12128	N	LYS	C	207	44.257	69.863	118.563	1.00	82.04	N
ATOM	12130	CA	LYS	C	207	45.180	68.869	119.060	1.00	82.54	C
ATOM	12132	CB	LYS	C	207	45.015	67.583	118.263	1.00	78.30	C
ATOM	12135	CG	LYS	C	207	43.851	66.746	118.747	1.00	79.34	C
ATOM	12138	CD	LYS	C	207	44.253	65.776	119.859	1.00	83.48	C
ATOM	12141	CE	LYS	C	207	43.082	65.543	120.827	1.00	87.11	C
ATOM	12144	NZ	LYS	C	207	43.103	64.157	121.312	1.00	89.42	N
ATOM	12148	C	LYS	C	207	46.566	69.432	118.866	1.00	83.38	C
ATOM	12149	O	LYS	C	207	46.950	69.716	117.727	1.00	79.79	O
ATOM	12150	N	SER	C	208	47.307	69.585	119.974	1.00	88.00	N
ATOM	12152	CA	SER	C	208	48.616	70.245	119.940	1.00	89.86	C
ATOM	12154	CB	SER	C	208	48.480	71.696	120.405	1.00	94.01	C
ATOM	12157	OG	SER	C	208	48.739	71.839	121.786	1.00	101.12	O
ATOM	12159	C	SER	C	208	49.701	69.477	120.706	1.00	92.09	C
ATOM	12160	O	SER	C	208	49.485	68.338	121.104	1.00	91.27	O
ATOM	12161	N	PHE	C	209	50.881	70.092	120.841	1.00	94.82	N
ATOM	12163	CA	PHE	C	209	52.047	69.472	121.487	1.00	97.65	C
ATOM	12165	CB	PHE	C	209	52.583	68.375	120.587	1.00	93.33	C
ATOM	12168	CG	PHE	C	209	53.213	68.915	119.352	1.00	90.96	C
ATOM	12169	CD1	PHE	C	209	54.542	69.293	119.354	1.00	92.49	C
ATOM	12171	CE1	PHE	C	209	55.156	69.817	118.232	1.00	90.22	C
ATOM	12173	CZ	PHE	C	209	54.445	69.986	117.093	1.00	86.31	C
ATOM	12175	CE2	PHE	C	209	53.081	69.625	117.063	1.00	85.26	C
ATOM	12177	CD2	PHE	C	209	52.471	69.103	118.197	1.00	87.32	C
ATOM	12179	C	PHE	C	209	53.203	70.469	121.743	1.00	101.51	C
ATOM	12180	O	PHE	C	209	53.169	71.618	121.266	1.00	101.04	O
ATOM	12181	N	ASN	C	210	54.241	69.987	122.454	1.00	105.05	N
ATOM	12183	CA	ASN	C	210	55.489	70.740	122.698	1.00	109.04	C
ATOM	12185	CB	ASN	C	210	56.296	70.878	121.379	1.00	104.70	C
ATOM	12188	CG	ASN	C	210	57.652	71.550	121.525	1.00	107.23	C
ATOM	12189	OD1	ASN	C	210	58.002	72.407	120.710	1.00	103.98	O
ATOM	12190	ND2	ASN	C	210	58.447	71.118	122.493	1.00	110.21	N
ATOM	12193	C	ASN	C	210	55.024	72.070	123.298	1.00	113.97	C
ATOM	12194	O	ASN	C	210	55.282	73.132	122.742	1.00	115.08	O
ATOM	12195	N	ARG	C	211	54.328	71.954	124.444	1.00	118.00	N
ATOM	12197	CA	ARG	C	211	53.444	72.976	125.069	1.00	121.86	C
ATOM	12199	CB	ARG	C	211	54.110	74.377	125.154	1.00	126.69	C
ATOM	12208	C	ARG	C	211	52.005	73.001	124.427	1.00	117.02	C
ATOM	12209	O	ARG	C	211	51.034	73.584	124.925	1.00	119.42	O
ATOM	12210	OXT	ARG	C	211	51.618	72.421	123.385	1.00	109.85	O
ATOM	12211	N	ALA	D	1	41.982	30.461	82.277	1.00	57.00	N
ATOM	12213	CA	ALA	D	1	41.459	31.172	81.013	1.00	55.46	C
ATOM	12215	CB	ALA	D	1	39.904	31.400	81.090	1.00	56.48	C
ATOM	12219	C	ALA	D	1	42.126	32.481	80.527	1.00	50.69	C
ATOM	12220	O	ALA	D	1	43.285	32.669	80.747	1.00	52.53	O
ATOM	12223	N	VAL	D	2	41.421	33.378	79.851	1.00	47.38	N
ATOM	12225	CA	VAL	D	2	42.079	34.564	79.219	1.00	44.48	C
ATOM	12227	CB	VAL	D	2	41.096	35.532	78.483	1.00	41.76	C
ATOM	12229	CG1	VAL	D	2	41.905	36.738	77.915	1.00	40.38	C



ATOM	12233	CG2	VAL	D	2	40.388	34.848	77.355	1.00	39.69	C
ATOM	12237	C	VAL	D	2	42.842	35.498	80.122	1.00	44.26	C
ATOM	12238	O	VAL	D	2	42.298	36.058	81.022	1.00	44.63	O
ATOM	12239	N	GLN	D	3	44.102	35.758	79.839	1.00	45.24	N
ATOM	12241	CA	GLN	D	3	44.919	36.578	80.772	1.00	45.86	C
ATOM	12243	CB	GLN	D	3	45.720	35.704	81.745	1.00	48.64	C
ATOM	12246	CG	GLN	D	3	44.864	34.972	82.827	1.00	51.62	C
ATOM	12249	CD	GLN	D	3	45.710	34.463	84.014	1.00	59.14	C
ATOM	12250	OE1	GLN	D	3	46.947	34.642	84.062	1.00	62.63	O
ATOM	12251	NE2	GLN	D	3	45.053	33.840	84.973	1.00	62.87	N
ATOM	12254	C	GLN	D	3	45.815	37.442	79.938	1.00	43.72	C
ATOM	12255	O	GLN	D	3	46.250	36.962	78.925	1.00	44.39	O
ATOM	12256	N	LEU	D	4	46.002	38.713	80.310	1.00	42.40	N
ATOM	12258	CA	LEU	D	4	46.977	39.641	79.686	1.00	40.47	C
ATOM	12260	CB	LEU	D	4	46.256	40.846	79.083	1.00	37.49	C
ATOM	12263	CG	LEU	D	4	45.152	40.660	78.040	1.00	36.95	C
ATOM	12265	CD1	LEU	D	4	45.432	41.577	76.858	1.00	36.62	C
ATOM	12269	CD2	LEU	D	4	45.043	39.356	77.504	1.00	39.31	C
ATOM	12273	C	LEU	D	4	47.969	40.192	80.723	1.00	41.49	C
ATOM	12274	O	LEU	D	4	47.599	40.842	81.665	1.00	41.51	O
ATOM	12275	N	LYS	D	5	49.250	39.970	80.549	1.00	43.23	N
ATOM	12277	CA	LYS	D	5	50.217	40.446	81.543	1.00	45.14	C
ATOM	12279	CB	LYS	D	5	50.892	39.284	82.282	1.00	48.88	C
ATOM	12282	CG	LYS	D	5	49.903	38.536	83.266	1.00	54.47	C
ATOM	12285	CD	LYS	D	5	50.560	37.297	83.990	1.00	60.79	C
ATOM	12288	CE	LYS	D	5	49.635	36.013	83.904	1.00	63.31	C
ATOM	12291	NZ	LYS	D	5	50.408	34.721	84.358	1.00	69.55	N
ATOM	12295	C	LYS	D	5	51.231	41.305	80.900	1.00	43.29	C
ATOM	12296	O	LYS	D	5	51.789	40.931	79.897	1.00	43.73	O
ATOM	12297	N	GLN	D	6	51.474	42.461	81.495	1.00	42.41	N
ATOM	12299	CA	GLN	D	6	52.383	43.434	80.924	1.00	41.52	C
ATOM	12301	CB	GLN	D	6	51.796	44.835	81.003	1.00	40.15	C
ATOM	12304	CG	GLN	D	6	50.406	44.997	80.357	1.00	39.53	C
ATOM	12307	CD	GLN	D	6	49.771	46.341	80.616	1.00	38.13	C
ATOM	12308	OE1	GLN	D	6	50.442	47.334	80.783	1.00	39.92	O
ATOM	12309	NE2	GLN	D	6	48.468	46.370	80.597	1.00	40.10	N
ATOM	12312	C	GLN	D	6	53.668	43.410	81.676	1.00	43.59	C
ATOM	12313	O	GLN	D	6	53.675	43.182	82.887	1.00	43.49	O
ATOM	12314	N	SER	D	7	54.749	43.568	80.920	1.00	44.87	N
ATOM	12316	CA	SER	D	7	56.016	44.080	81.435	1.00	48.01	C
ATOM	12318	CB	SER	D	7	57.107	42.989	81.406	1.00	51.52	C
ATOM	12321	OG	SER	D	7	57.386	42.519	80.095	1.00	51.53	O
ATOM	12323	C	SER	D	7	56.521	45.303	80.675	1.00	47.70	C
ATOM	12324	O	SER	D	7	56.324	45.395	79.469	1.00	46.37	O
ATOM	12325	N	GLY	D	8	57.216	46.210	81.364	1.00	50.18	N
ATOM	12327	CA	GLY	D	8	57.911	47.315	80.713	1.00	50.86	C
ATOM	12330	C	GLY	D	8	58.393	48.422	81.619	1.00	52.58	C
ATOM	12331	O	GLY	D	8	57.780	48.763	82.605	1.00	51.07	O
ATOM	12332	N	PRO	D	9	59.516	49.021	81.266	1.00	56.53	N
ATOM	12333	CA	PRO	D	9	60.030	50.159	82.043	1.00	58.30	C
ATOM	12335	CB	PRO	D	9	61.288	50.586	81.284	1.00	61.09	C
ATOM	12338	CG	PRO	D	9	61.824	49.267	80.591	1.00	62.53	C
ATOM	12341	CD	PRO	D	9	60.435	48.657	80.162	1.00	58.96	C
ATOM	12344	C	PRO	D	9	59.005	51.228	82.035	1.00	56.45	C
ATOM	12345	O	PRO	D	9	58.635	51.619	80.919	1.00	55.51	O
ATOM	12346	N	GLY	D	10	58.485	51.541	83.237	1.00	56.24	N
ATOM	12348	CA	GLY	D	10	57.666	52.714	83.525	1.00	54.81	C
ATOM	12351	C	GLY	D	10	58.271	54.154	83.662	1.00	55.43	C
ATOM	12352	O	GLY	D	10	57.660	55.095	83.144	1.00	53.90	O
ATOM	12353	N	LEU	D	11	59.401	54.365	84.340	1.00	56.80	N
ATOM	12355	CA	LEU	D	11	60.044	55.699	84.289	1.00	57.96	C
ATOM	12357	CB	LEU	D	11	61.148	55.834	85.329	1.00	61.18	C
ATOM	12360	CG	LEU	D	11	61.792	57.218	85.406	1.00	62.40	C
ATOM	12362	CD1	LEU	D	11	60.836	58.390	85.187	1.00	61.71	C
ATOM	12366	CD2	LEU	D	11	62.429	57.397	86.726	1.00	63.46	C
ATOM	12370	C	LEU	D	11	60.627	55.983	82.904	1.00	57.05	C
ATOM	12371	O	LEU	D	11	61.347	55.208	82.383	1.00	58.70	O
ATOM	12372	N	VAL	D	12	60.292	57.085	82.291	1.00	55.69	N

ATOM	12374	CA	VAL	D	12	60.629	57.284	80.914	1.00	55.00	C
ATOM	12376	CB	VAL	D	12	59.409	57.062	80.020	1.00	52.03	C
ATOM	12378	CG1	VAL	D	12	59.667	57.583	78.591	1.00	54.04	C
ATOM	12382	CG2	VAL	D	12	59.123	55.658	79.921	1.00	50.83	C
ATOM	12386	C	VAL	D	12	61.019	58.701	80.732	1.00	56.49	C
ATOM	12387	O	VAL	D	12	60.264	59.589	81.020	1.00	55.45	O
ATOM	12388	N	GLN	D	13	62.182	58.916	80.163	1.00	59.59	N
ATOM	12390	CA	GLN	D	13	62.707	60.278	80.045	1.00	62.52	C
ATOM	12392	CB	GLN	D	13	64.212	60.305	79.899	1.00	65.71	C
ATOM	12395	CG	GLN	D	13	64.776	60.399	81.258	1.00	69.08	C
ATOM	12398	CD	GLN	D	13	66.219	60.422	81.271	1.00	77.09	C
ATOM	12399	OE1	GLN	D	13	66.874	60.460	80.225	1.00	81.75	O
ATOM	12400	NE2	GLN	D	13	66.770	60.414	82.464	1.00	82.68	N
ATOM	12403	C	GLN	D	13	62.064	60.980	78.931	1.00	61.31	C
ATOM	12404	O	GLN	D	13	61.775	60.374	77.918	1.00	60.31	O
ATOM	12405	N	PRO	D	14	61.769	62.245	79.137	1.00	62.39	N
ATOM	12406	CA	PRO	D	14	61.018	62.986	78.155	1.00	61.94	C
ATOM	12408	CB	PRO	D	14	60.741	64.296	78.849	1.00	63.94	C
ATOM	12411	CG	PRO	D	14	61.829	64.410	79.730	1.00	66.71	C
ATOM	12414	CD	PRO	D	14	62.070	63.082	80.291	1.00	64.87	C
ATOM	12417	C	PRO	D	14	61.835	63.107	76.888	1.00	63.56	C
ATOM	12418	O	PRO	D	14	63.036	63.175	76.841	1.00	63.90	O
ATOM	12419	N	SER	D	15	61.050	62.965	75.841	1.00	62.98	N
ATOM	12421	CA	SER	D	15	61.451	62.904	74.452	1.00	64.41	C
ATOM	12423	CB	SER	D	15	62.324	64.072	74.064	1.00	67.55	C
ATOM	12426	OG	SER	D	15	63.444	63.478	73.590	1.00	66.46	O
ATOM	12428	C	SER	D	15	62.057	61.533	74.072	1.00	64.44	C
ATOM	12429	O	SER	D	15	62.277	61.275	72.902	1.00	65.45	O
ATOM	12430	N	GLN	D	16	62.212	60.620	75.032	1.00	64.20	N
ATOM	12432	CA	GLN	D	16	62.561	59.213	74.717	1.00	63.39	C
ATOM	12434	CB	GLN	D	16	63.626	58.733	75.704	1.00	65.81	C
ATOM	12437	CG	GLN	D	16	64.952	58.300	75.040	1.00	71.75	C
ATOM	12440	CD	GLN	D	16	65.920	58.044	76.159	1.00	80.91	C
ATOM	12441	OE1	GLN	D	16	65.494	58.154	77.339	1.00	85.18	O
ATOM	12442	NE2	GLN	D	16	67.191	57.708	75.856	1.00	83.89	N
ATOM	12445	C	GLN	D	16	61.346	58.241	74.614	1.00	57.84	C
ATOM	12446	O	GLN	D	16	60.221	58.667	74.789	1.00	56.16	O
ATOM	12447	N	SER	D	17	61.557	56.958	74.323	1.00	56.20	N
ATOM	12449	CA	SER	D	17	60.435	56.035	74.025	1.00	53.11	C
ATOM	12451	CB	SER	D	17	60.826	55.185	72.839	1.00	53.56	C
ATOM	12454	OG	SER	D	17	61.347	53.954	73.336	1.00	55.78	O
ATOM	12456	C	SER	D	17	59.885	55.054	75.152	1.00	50.62	C
ATOM	12457	O	SER	D	17	60.571	54.565	75.997	1.00	53.47	O
ATOM	12458	N	LEU	D	18	58.624	54.752	75.101	1.00	46.73	N
ATOM	12460	CA	LEU	D	18	57.978	53.917	76.046	1.00	44.77	C
ATOM	12462	CB	LEU	D	18	56.567	54.511	76.298	1.00	42.30	C
ATOM	12465	CG	LEU	D	18	55.563	53.620	76.986	1.00	40.07	C
ATOM	12467	CD1	LEU	D	18	56.090	53.066	78.283	1.00	41.41	C
ATOM	12471	CD2	LEU	D	18	54.332	54.437	77.255	1.00	41.25	C
ATOM	12475	C	LEU	D	18	57.806	52.599	75.327	1.00	43.93	C
ATOM	12476	O	LEU	D	18	57.148	52.565	74.292	1.00	42.76	O
ATOM	12477	N	SER	D	19	58.323	51.506	75.879	1.00	44.90	N
ATOM	12479	CA	SER	D	19	58.085	50.145	75.341	1.00	43.56	C
ATOM	12481	CB	SER	D	19	59.401	49.524	74.816	1.00	46.48	C
ATOM	12484	OG	SER	D	19	59.933	50.140	73.634	1.00	46.71	O
ATOM	12486	C	SER	D	19	57.448	49.240	76.426	1.00	42.19	C
ATOM	12487	O	SER	D	19	57.952	49.152	77.562	1.00	44.56	O
ATOM	12488	N	ILE	D	20	56.343	48.596	76.071	1.00	39.20	N
ATOM	12490	CA	ILE	D	20	55.610	47.698	76.923	1.00	38.53	C
ATOM	12492	CB	ILE	D	20	54.240	48.329	77.293	1.00	37.18	C
ATOM	12494	CG1	ILE	D	20	54.377	49.567	78.173	1.00	37.34	C
ATOM	12497	CD1	ILE	D	20	53.211	50.449	78.017	1.00	39.17	C
ATOM	12501	CG2	ILE	D	20	53.280	47.309	78.017	1.00	37.55	C
ATOM	12505	C	ILE	D	20	55.324	46.437	76.164	1.00	38.06	C
ATOM	12506	O	ILE	D	20	54.932	46.471	75.000	1.00	36.64	O
ATOM	12507	N	THR	D	21	55.441	45.303	76.835	1.00	40.37	N
ATOM	12509	CA	THR	D	21	55.088	44.001	76.249	1.00	41.04	C
ATOM	12511	CB	THR	D	21	56.261	43.068	76.450	1.00	43.74	C

ATOM	12513	OG1	THR	D	21	57.415	43.589	75.748	1.00	46.48	O
ATOM	12515	CG2	THR	D	21	55.958	41.774	75.812	1.00	45.01	C
ATOM	12519	C	THR	D	21	53.813	43.430	76.933	1.00	40.58	C
ATOM	12520	O	THR	D	21	53.626	43.567	78.162	1.00	41.40	O
ATOM	12521	N	CYS	D	22	52.939	42.816	76.145	1.00	39.61	N
ATOM	12523	CA	CYS	D	22	51.711	42.179	76.631	1.00	39.65	C
ATOM	12525	CB	CYS	D	22	50.514	42.703	75.891	1.00	36.18	C
ATOM	12528	SG	CYS	D	22	48.888	42.439	76.557	1.00	40.37	S
ATOM	12529	C	CYS	D	22	51.943	40.719	76.274	1.00	41.94	C
ATOM	12530	O	CYS	D	22	51.961	40.359	75.089	1.00	42.48	O
ATOM	12531	N	THR	D	23	52.199	39.891	77.285	1.00	43.68	N
ATOM	12533	CA	THR	D	23	52.093	38.468	77.096	1.00	45.36	C
ATOM	12535	CB	THR	D	23	53.107	37.752	77.925	1.00	48.80	C
ATOM	12537	OG1	THR	D	23	54.348	38.483	77.823	1.00	53.25	O
ATOM	12539	CG2	THR	D	23	53.391	36.405	77.328	1.00	48.29	C
ATOM	12543	C	THR	D	23	50.749	37.970	77.417	1.00	44.01	C
ATOM	12544	O	THR	D	23	50.309	38.115	78.469	1.00	45.58	O
ATOM	12545	N	VAL	D	24	50.189	37.240	76.505	1.00	44.18	N
ATOM	12547	CA	VAL	D	24	48.801	36.874	76.441	1.00	43.47	C
ATOM	12549	CB	VAL	D	24	48.356	37.223	74.983	1.00	41.96	C
ATOM	12551	CG1	VAL	D	24	47.387	36.320	74.500	1.00	46.10	C
ATOM	12555	CG2	VAL	D	24	47.785	38.612	74.857	1.00	38.96	C
ATOM	12559	C	VAL	D	24	48.716	35.342	76.633	1.00	45.93	C
ATOM	12560	O	VAL	D	24	49.555	34.625	76.140	1.00	47.90	O
ATOM	12561	N	SER	D	25	47.696	34.840	77.320	1.00	46.33	N
ATOM	12563	CA	SER	D	25	47.435	33.388	77.384	1.00	48.67	C
ATOM	12565	CB	SER	D	25	48.043	32.805	78.617	1.00	51.18	C
ATOM	12568	OG	SER	D	25	47.357	33.326	79.724	1.00	50.94	O
ATOM	12570	C	SER	D	25	45.932	33.060	77.394	1.00	47.97	C
ATOM	12571	O	SER	D	25	45.123	33.821	77.850	1.00	46.72	O
ATOM	12572	N	GLY	D	26	45.566	31.903	76.896	1.00	49.61	N
ATOM	12574	CA	GLY	D	26	44.195	31.497	76.922	1.00	49.63	C
ATOM	12577	C	GLY	D	26	43.485	31.917	75.682	1.00	47.39	C
ATOM	12578	O	GLY	D	26	42.289	31.683	75.579	1.00	48.65	O
ATOM	12579	N	PHE	D	27	44.175	32.578	74.766	1.00	44.85	N
ATOM	12581	CA	PHE	D	27	43.678	32.695	73.407	1.00	42.48	C
ATOM	12583	CB	PHE	D	27	42.750	33.823	73.310	1.00	38.91	C
ATOM	12586	CG	PHE	D	27	43.398	35.137	73.470	1.00	37.97	C
ATOM	12587	CD1	PHE	D	27	43.723	35.946	72.327	1.00	36.52	C
ATOM	12589	CE1	PHE	D	27	44.286	37.244	72.465	1.00	32.40	C
ATOM	12591	CZ	PHE	D	27	44.529	37.730	73.713	1.00	33.39	C
ATOM	12593	CE2	PHE	D	27	44.200	36.928	74.876	1.00	36.37	C
ATOM	12595	CD2	PHE	D	27	43.631	35.636	74.733	1.00	37.60	C
ATOM	12597	C	PHE	D	27	44.849	32.968	72.521	1.00	42.29	C
ATOM	12598	O	PHE	D	27	45.885	33.253	73.043	1.00	43.18	O
ATOM	12599	N	SER	D	28	44.701	32.894	71.199	1.00	41.48	N
ATOM	12601	CA	SER	D	28	45.787	33.229	70.284	1.00	41.06	C
ATOM	12603	CB	SER	D	28	46.052	32.076	69.303	1.00	43.62	C
ATOM	12606	OG	SER	D	28	45.379	32.165	68.103	1.00	42.29	O
ATOM	12608	C	SER	D	28	45.579	34.557	69.592	1.00	38.22	C
ATOM	12609	O	SER	D	28	44.467	34.940	69.333	1.00	36.54	O
ATOM	12610	N	LEU	D	29	46.675	35.275	69.369	1.00	38.34	N
ATOM	12612	CA	LEU	D	29	46.673	36.543	68.643	1.00	36.43	C
ATOM	12614	CB	LEU	D	29	48.007	37.269	68.769	1.00	35.93	C
ATOM	12617	CG	LEU	D	29	48.340	37.596	70.229	1.00	37.34	C
ATOM	12619	CD1	LEU	D	29	49.853	37.698	70.436	1.00	42.57	C
ATOM	12623	CD2	LEU	D	29	47.767	38.823	70.769	1.00	35.50	C
ATOM	12627	C	LEU	D	29	46.360	36.329	67.182	1.00	36.97	C
ATOM	12628	O	LEU	D	29	46.087	37.243	66.425	1.00	36.62	O
ATOM	12629	N	THR	D	30	46.351	35.089	66.796	1.00	39.55	N
ATOM	12631	CA	THR	D	30	45.918	34.679	65.473	1.00	39.97	C
ATOM	12633	CB	THR	D	30	46.294	33.210	65.329	1.00	43.13	C
ATOM	12635	OG1	THR	D	30	47.406	33.151	64.447	1.00	45.16	O
ATOM	12637	CG2	THR	D	30	45.192	32.267	64.762	1.00	43.76	C
ATOM	12641	C	THR	D	30	44.454	34.936	65.221	1.00	38.74	C
ATOM	12642	O	THR	D	30	44.112	35.136	64.063	1.00	39.61	O
ATOM	12643	N	ASN	D	31	43.611	34.983	66.267	1.00	37.45	N
ATOM	12645	CA	ASN	D	31	42.163	35.188	66.094	1.00	36.67	C

ATOM	12647	CB	ASN	D	31	41.384	34.034	66.706	1.00	38.21	C
ATOM	12650	CG	ASN	D	31	41.839	32.691	66.202	1.00	40.54	C
ATOM	12651	OD1	ASN	D	31	42.034	32.490	64.993	1.00	41.36	O
ATOM	12652	ND2	ASN	D	31	42.022	31.763	67.125	1.00	40.98	N
ATOM	12655	C	ASN	D	31	41.563	36.434	66.711	1.00	34.82	C
ATOM	12656	O	ASN	D	31	40.386	36.809	66.403	1.00	34.97	O
ATOM	12657	N	TYR	D	32	42.328	37.047	67.606	1.00	33.79	N
ATOM	12659	CA	TYR	D	32	41.897	38.238	68.386	1.00	31.32	C
ATOM	12661	CB	TYR	D	32	41.680	37.931	69.881	1.00	30.94	C
ATOM	12664	CG	TYR	D	32	40.436	37.197	70.158	1.00	31.75	C
ATOM	12665	CD1	TYR	D	32	40.437	35.834	70.261	1.00	35.96	C
ATOM	12667	CE1	TYR	D	32	39.263	35.109	70.544	1.00	37.48	C
ATOM	12669	CZ	TYR	D	32	38.076	35.762	70.634	1.00	38.25	C
ATOM	12670	OH	TYR	D	32	36.944	35.006	70.814	1.00	42.78	O
ATOM	12672	CE2	TYR	D	32	38.032	37.152	70.457	1.00	36.56	C
ATOM	12674	CD2	TYR	D	32	39.225	37.857	70.249	1.00	33.48	C
ATOM	12676	C	TYR	D	32	42.934	39.293	68.222	1.00	29.57	C
ATOM	12677	O	TYR	D	32	44.098	38.983	68.095	1.00	32.81	O
ATOM	12678	N	GLY	D	33	42.505	40.521	68.175	1.00	27.55	N
ATOM	12680	CA	GLY	D	33	43.339	41.698	68.179	1.00	27.54	C
ATOM	12683	C	GLY	D	33	43.622	42.083	69.643	1.00	28.10	C
ATOM	12684	O	GLY	D	33	42.841	41.699	70.478	1.00	28.48	O
ATOM	12685	N	VAL	D	34	44.747	42.753	69.946	1.00	28.42	N
ATOM	12687	CA	VAL	D	34	44.978	43.335	71.246	1.00	28.37	C
ATOM	12689	CB	VAL	D	34	46.329	42.870	71.774	1.00	29.29	C
ATOM	12691	CG1	VAL	D	34	46.618	43.435	73.133	1.00	29.09	C
ATOM	12695	CG2	VAL	D	34	46.332	41.434	71.903	1.00	31.00	C
ATOM	12699	C	VAL	D	34	44.958	44.866	71.101	1.00	28.37	C
ATOM	12700	O	VAL	D	34	45.624	45.432	70.231	1.00	28.84	O
ATOM	12701	N	HIS	D	35	44.195	45.528	71.940	1.00	28.35	N
ATOM	12703	CA	HIS	D	35	44.057	46.977	71.908	1.00	29.07	C
ATOM	12705	CB	HIS	D	35	42.582	47.405	72.135	1.00	28.80	C
ATOM	12708	CG	HIS	D	35	41.629	46.857	71.124	1.00	28.13	C
ATOM	12709	ND1	HIS	D	35	41.245	47.557	70.018	1.00	28.65	N
ATOM	12711	CE1	HIS	D	35	40.387	46.852	69.309	1.00	28.35	C
ATOM	12713	NE2	HIS	D	35	40.220	45.689	69.902	1.00	29.20	N
ATOM	12715	CD2	HIS	D	35	40.962	45.687	71.062	1.00	30.52	C
ATOM	12717	C	HIS	D	35	44.914	47.588	72.996	1.00	30.05	C
ATOM	12718	O	HIS	D	35	45.252	46.902	73.960	1.00	31.00	O
ATOM	12719	N	TRP	D	36	45.191	48.891	72.888	1.00	30.37	N
ATOM	12721	CA	TRP	D	36	45.968	49.637	73.896	1.00	30.27	C
ATOM	12723	CB	TRP	D	36	47.309	50.002	73.310	1.00	30.97	C
ATOM	12726	CG	TRP	D	36	48.150	48.741	73.152	1.00	33.79	C
ATOM	12727	CD1	TRP	D	36	48.170	47.889	72.086	1.00	35.19	C
ATOM	12729	NE1	TRP	D	36	49.026	46.835	72.340	1.00	35.82	N
ATOM	12731	CE2	TRP	D	36	49.551	46.981	73.589	1.00	34.05	C
ATOM	12732	CD2	TRP	D	36	49.040	48.169	74.124	1.00	33.66	C
ATOM	12733	CE3	TRP	D	36	49.467	48.562	75.374	1.00	33.15	C
ATOM	12735	CZ3	TRP	D	36	50.354	47.796	76.024	1.00	37.51	C
ATOM	12737	CH2	TRP	D	36	50.881	46.636	75.451	1.00	38.07	C
ATOM	12739	CZ2	TRP	D	36	50.470	46.216	74.235	1.00	37.73	C
ATOM	12741	C	TRP	D	36	45.246	50.892	74.309	1.00	30.62	C
ATOM	12742	O	TRP	D	36	44.780	51.687	73.485	1.00	31.69	O
ATOM	12743	N	VAL	D	37	45.089	51.077	75.591	1.00	30.38	N
ATOM	12745	CA	VAL	D	37	44.250	52.184	76.057	1.00	30.87	C
ATOM	12747	CB	VAL	D	37	42.965	51.664	76.601	1.00	30.04	C
ATOM	12749	CG1	VAL	D	37	42.249	52.681	77.266	1.00	29.29	C
ATOM	12753	CG2	VAL	D	37	42.196	51.029	75.509	1.00	29.91	C
ATOM	12757	C	VAL	D	37	45.001	52.685	77.207	1.00	32.03	C
ATOM	12758	O	VAL	D	37	45.581	51.865	77.898	1.00	33.02	O
ATOM	12759	N	ARG	D	38	44.997	53.987	77.438	1.00	32.94	N
ATOM	12761	CA	ARG	D	38	45.661	54.526	78.606	1.00	34.28	C
ATOM	12763	CB	ARG	D	38	46.875	55.319	78.163	1.00	35.74	C
ATOM	12766	CG	ARG	D	38	46.557	56.678	77.574	1.00	36.42	C
ATOM	12769	CD	ARG	D	38	47.776	57.442	77.251	1.00	36.01	C
ATOM	12772	NE	ARG	D	38	47.459	58.672	76.558	1.00	38.09	N
ATOM	12774	CZ	ARG	D	38	48.345	59.511	76.121	1.00	36.79	C
ATOM	12775	NH1	ARG	D	38	49.623	59.276	76.303	1.00	39.89	N

ATOM	12778	NH2	ARG	D	38	47.960	60.562	75.501	1.00	38.50	N
ATOM	12781	C	ARG	D	38	44.763	55.369	79.527	1.00	34.80	C
ATOM	12782	O	ARG	D	38	43.781	55.900	79.125	1.00	33.76	O
ATOM	12783	N	GLN	D	39	45.159	55.528	80.755	1.00	35.60	N
ATOM	12785	CA	GLN	D	39	44.335	56.277	81.633	1.00	38.73	C
ATOM	12787	CB	GLN	D	39	43.724	55.284	82.598	1.00	39.56	C
ATOM	12790	CG	GLN	D	39	42.743	55.887	83.573	1.00	41.47	C
ATOM	12793	CD	GLN	D	39	42.015	54.861	84.346	1.00	40.76	C
ATOM	12794	OE1	GLN	D	39	42.588	53.843	84.731	1.00	40.61	O
ATOM	12795	NE2	GLN	D	39	40.736	55.120	84.599	1.00	45.06	N
ATOM	12798	C	GLN	D	39	45.148	57.376	82.371	1.00	41.44	C
ATOM	12799	O	GLN	D	39	46.199	57.117	82.951	1.00	41.23	O
ATOM	12800	N	SER	D	40	44.701	58.612	82.294	1.00	43.95	N
ATOM	12802	CA	SER	D	40	45.297	59.665	83.117	1.00	48.33	C
ATOM	12804	CB	SER	D	40	45.996	60.801	82.338	1.00	49.57	C
ATOM	12807	OG	SER	D	40	45.266	61.127	81.159	1.00	48.49	O
ATOM	12809	C	SER	D	40	44.162	60.222	83.917	1.00	51.39	C
ATOM	12810	O	SER	D	40	43.005	60.374	83.420	1.00	53.29	O
ATOM	12811	N	PRO	D	41	44.470	60.547	85.153	1.00	53.68	N
ATOM	12812	CA	PRO	D	41	43.423	60.996	86.069	1.00	57.08	C
ATOM	12814	CB	PRO	D	41	44.192	61.252	87.364	1.00	58.57	C
ATOM	12817	CG	PRO	D	41	45.528	61.522	86.889	1.00	57.21	C
ATOM	12820	CD	PRO	D	41	45.811	60.620	85.736	1.00	53.85	C
ATOM	12823	C	PRO	D	41	42.753	62.260	85.443	1.00	59.94	C
ATOM	12824	O	PRO	D	41	41.491	62.335	85.416	1.00	60.69	O
ATOM	12825	N	GLY	D	42	43.616	63.113	84.835	1.00	61.45	N
ATOM	12827	CA	GLY	D	42	43.269	64.364	84.131	1.00	64.05	C
ATOM	12830	C	GLY	D	42	42.483	64.364	82.805	1.00	63.41	C
ATOM	12831	O	GLY	D	42	41.364	64.858	82.825	1.00	65.45	O
ATOM	12832	N	LYS	D	43	43.023	63.893	81.661	1.00	60.97	N
ATOM	12834	CA	LYS	D	43	42.118	63.505	80.546	1.00	59.80	C
ATOM	12836	CB	LYS	D	43	42.851	63.131	79.232	1.00	57.52	C
ATOM	12843	C	LYS	D	43	41.186	62.352	81.078	1.00	58.39	C
ATOM	12844	O	LYS	D	43	40.305	62.593	82.000	1.00	63.11	O
ATOM	12845	N	GLY	D	44	41.315	61.144	80.548	1.00	53.00	N
ATOM	12847	CA	GLY	D	44	40.557	60.047	81.120	1.00	51.14	C
ATOM	12850	C	GLY	D	44	41.027	58.728	80.530	1.00	47.33	C
ATOM	12851	O	GLY	D	44	42.277	58.557	80.366	1.00	46.03	O
ATOM	12852	N	LEU	D	45	40.088	57.808	80.217	1.00	44.05	N
ATOM	12854	CA	LEU	D	45	40.455	56.553	79.559	1.00	40.18	C
ATOM	12856	CB	LEU	D	45	39.386	55.575	79.824	1.00	39.67	C
ATOM	12859	CG	LEU	D	45	39.601	54.171	80.329	1.00	38.63	C
ATOM	12861	CD1	LEU	D	45	40.898	53.853	80.863	1.00	37.61	C
ATOM	12865	CD2	LEU	D	45	38.510	54.020	81.401	1.00	42.06	C
ATOM	12869	C	LEU	D	45	40.553	56.808	78.075	1.00	38.78	C
ATOM	12870	O	LEU	D	45	39.585	57.217	77.474	1.00	42.37	O
ATOM	12871	N	GLU	D	46	41.683	56.616	77.442	1.00	36.39	N
ATOM	12873	CA	GLU	D	46	41.756	56.917	76.023	1.00	36.08	C
ATOM	12875	CB	GLU	D	46	42.482	58.195	75.876	1.00	38.06	C
ATOM	12878	CG	GLU	D	46	42.640	58.660	74.466	1.00	43.17	C
ATOM	12881	CD	GLU	D	46	43.757	59.721	74.236	1.00	49.47	C
ATOM	12882	OE1	GLU	D	46	44.654	59.993	75.192	1.00	44.91	O
ATOM	12883	OE2	GLU	D	46	43.686	60.248	73.037	1.00	46.97	O
ATOM	12884	C	GLU	D	46	42.359	55.793	75.169	1.00	32.98	C
ATOM	12885	O	GLU	D	46	43.347	55.226	75.508	1.00	31.48	O
ATOM	12886	N	TRP	D	47	41.679	55.438	74.096	1.00	32.53	N
ATOM	12888	CA	TRP	D	47	42.154	54.391	73.191	1.00	32.16	C
ATOM	12890	CB	TRP	D	47	41.001	53.746	72.467	1.00	31.08	C
ATOM	12893	CG	TRP	D	47	41.254	52.697	71.439	1.00	30.69	C
ATOM	12894	CD1	TRP	D	47	41.205	51.356	71.611	1.00	30.28	C
ATOM	12896	NE1	TRP	D	47	41.413	50.701	70.416	1.00	29.31	N
ATOM	12898	CE2	TRP	D	47	41.587	51.627	69.432	1.00	29.06	C
ATOM	12899	CD2	TRP	D	47	41.481	52.897	70.034	1.00	33.41	C
ATOM	12900	CE3	TRP	D	47	41.626	54.035	69.212	1.00	36.15	C
ATOM	12902	CZ3	TRP	D	47	41.836	53.864	67.825	1.00	32.52	C
ATOM	12904	CH2	TRP	D	47	41.916	52.607	67.285	1.00	30.16	C
ATOM	12906	CZ2	TRP	D	47	41.785	51.466	68.079	1.00	29.39	C
ATOM	12908	C	TRP	D	47	43.269	54.825	72.197	1.00	32.70	C

ATOM	12909	O	TRP	D	47	43.190	55.885	71.523	1.00	32.87	O
ATOM	12910	N	LEU	D	48	44.322	53.995	72.178	1.00	31.73	N
ATOM	12912	CA	LEU	D	48	45.556	54.317	71.463	1.00	32.99	C
ATOM	12914	CB	LEU	D	48	46.776	53.933	72.280	1.00	32.64	C
ATOM	12917	CG	LEU	D	48	46.758	54.648	73.611	1.00	32.13	C
ATOM	12919	CD1	LEU	D	48	47.957	54.186	74.392	1.00	32.17	C
ATOM	12923	CD2	LEU	D	48	46.771	56.119	73.414	1.00	32.53	C
ATOM	12927	C	LEU	D	48	45.631	53.665	70.121	1.00	32.70	C
ATOM	12928	O	LEU	D	48	45.921	54.298	69.140	1.00	32.71	O
ATOM	12929	N	GLY	D	49	45.363	52.376	70.092	1.00	32.34	N
ATOM	12931	CA	GLY	D	49	45.225	51.704	68.809	1.00	32.63	C
ATOM	12934	C	GLY	D	49	45.081	50.210	68.962	1.00	31.13	C
ATOM	12935	O	GLY	D	49	44.752	49.728	70.032	1.00	30.55	O
ATOM	12936	N	VAL	D	50	45.357	49.499	67.880	1.00	30.69	N
ATOM	12938	CA	VAL	D	50	45.234	48.071	67.858	1.00	29.69	C
ATOM	12940	CB	VAL	D	50	43.921	47.569	67.214	1.00	30.33	C
ATOM	12942	CG1	VAL	D	50	43.191	46.659	68.168	1.00	29.69	C
ATOM	12946	CG2	VAL	D	50	43.087	48.640	66.687	1.00	30.44	C
ATOM	12950	C	VAL	D	50	46.227	47.452	66.954	1.00	29.44	C
ATOM	12951	O	VAL	D	50	46.492	47.957	65.895	1.00	28.43	O
ATOM	12952	N	ILE	D	51	46.704	46.296	67.352	1.00	29.83	N
ATOM	12954	CA	ILE	D	51	47.217	45.344	66.382	1.00	31.60	C
ATOM	12956	CB	ILE	D	51	48.621	44.854	66.705	1.00	32.32	C
ATOM	12958	CG1	ILE	D	51	49.185	44.059	65.511	1.00	36.70	C
ATOM	12961	CD1	ILE	D	51	50.707	43.620	65.590	1.00	32.82	C
ATOM	12965	CG2	ILE	D	51	48.644	43.931	67.879	1.00	32.72	C
ATOM	12969	C	ILE	D	51	46.179	44.218	66.317	1.00	31.06	C
ATOM	12970	O	ILE	D	51	46.002	43.445	67.231	1.00	30.75	O
ATOM	12971	N	TRP	D	52	45.429	44.247	65.242	1.00	31.60	N
ATOM	12973	CA	TRP	D	52	44.467	43.230	64.869	1.00	31.36	C
ATOM	12975	CB	TRP	D	52	43.712	43.639	63.636	1.00	30.90	C
ATOM	12978	CG	TRP	D	52	42.953	44.914	63.709	1.00	29.08	C
ATOM	12979	CD1	TRP	D	52	43.219	46.097	63.033	1.00	28.04	C
ATOM	12981	NE1	TRP	D	52	42.243	47.006	63.289	1.00	26.54	N
ATOM	12983	CE2	TRP	D	52	41.321	46.397	64.086	1.00	25.66	C
ATOM	12984	CD2	TRP	D	52	41.738	45.097	64.333	1.00	26.15	C
ATOM	12985	CE3	TRP	D	52	40.927	44.278	65.103	1.00	29.06	C
ATOM	12987	CZ3	TRP	D	52	39.779	44.803	65.625	1.00	26.64	C
ATOM	12989	CH2	TRP	D	52	39.410	46.068	65.353	1.00	27.20	C
ATOM	12991	CZ2	TRP	D	52	40.166	46.880	64.583	1.00	28.98	C
ATOM	12993	C	TRP	D	52	45.108	41.895	64.531	1.00	32.27	C
ATOM	12994	O	TRP	D	52	46.307	41.779	64.320	1.00	32.72	O
ATOM	12995	N	SER	D	53	44.227	40.915	64.488	1.00	32.74	N
ATOM	12997	CA	SER	D	53	44.580	39.525	64.425	1.00	34.75	C
ATOM	12999	CB	SER	D	53	43.298	38.681	64.426	1.00	35.90	C
ATOM	13002	OG	SER	D	53	42.764	38.516	63.151	1.00	37.74	O
ATOM	13004	C	SER	D	53	45.454	39.204	63.274	1.00	35.30	C
ATOM	13005	O	SER	D	53	46.503	38.646	63.451	1.00	37.19	O
ATOM	13006	N	GLY	D	54	45.092	39.637	62.083	1.00	35.49	N
ATOM	13008	CA	GLY	D	54	45.992	39.425	60.943	1.00	35.48	C
ATOM	13011	C	GLY	D	54	47.220	40.303	60.835	1.00	34.39	C
ATOM	13012	O	GLY	D	54	47.807	40.343	59.768	1.00	36.25	O
ATOM	13013	N	GLY	D	55	47.614	40.991	61.899	1.00	32.23	N
ATOM	13015	CA	GLY	D	55	48.901	41.684	61.913	1.00	33.48	C
ATOM	13018	C	GLY	D	55	48.859	43.138	61.531	1.00	33.28	C
ATOM	13019	O	GLY	D	55	49.752	43.862	61.701	1.00	33.23	O
ATOM	13020	N	ASN	D	56	47.752	43.574	61.012	1.00	33.55	N
ATOM	13022	CA	ASN	D	56	47.664	44.924	60.574	1.00	35.11	C
ATOM	13024	CB	ASN	D	56	46.626	45.025	59.499	1.00	34.70	C
ATOM	13027	CG	ASN	D	56	45.305	44.633	59.959	1.00	35.37	C
ATOM	13028	OD1	ASN	D	56	44.385	45.451	59.883	1.00	40.28	O
ATOM	13029	ND2	ASN	D	56	45.122	43.357	60.343	1.00	36.56	N
ATOM	13032	C	ASN	D	56	47.347	45.795	61.765	1.00	34.36	C
ATOM	13033	O	ASN	D	56	46.820	45.268	62.750	1.00	33.78	O
ATOM	13034	N	THR	D	57	47.669	47.100	61.710	1.00	34.41	N
ATOM	13036	CA	THR	D	57	47.319	47.969	62.842	1.00	32.78	C
ATOM	13038	CB	THR	D	57	48.563	48.487	63.562	1.00	32.50	C
ATOM	13040	OG1	THR	D	57	49.303	49.334	62.711	1.00	34.26	O

ATOM	13042	CG2	THR	D	57	49.505	47.392	63.858	1.00	33.15	C
ATOM	13046	C	THR	D	57	46.377	49.127	62.532	1.00	32.96	C
ATOM	13047	O	THR	D	57	46.016	49.401	61.417	1.00	34.56	O
ATOM	13048	N	ASP	D	58	45.957	49.794	63.572	1.00	32.56	N
ATOM	13050	CA	ASP	D	58	45.262	51.043	63.418	1.00	33.53	C
ATOM	13052	CB	ASP	D	58	43.805	50.801	63.352	1.00	32.81	C
ATOM	13055	CG	ASP	D	58	43.086	51.930	62.805	1.00	35.44	C
ATOM	13056	OD1	ASP	D	58	43.702	52.786	62.201	1.00	39.99	O
ATOM	13057	OD2	ASP	D	58	41.850	52.052	62.880	1.00	44.18	O
ATOM	13058	C	ASP	D	58	45.555	51.858	64.639	1.00	34.20	C
ATOM	13059	O	ASP	D	58	45.601	51.348	65.789	1.00	33.15	O
ATOM	13060	N	TYR	D	59	45.757	53.139	64.413	1.00	36.15	N
ATOM	13062	CA	TYR	D	59	46.178	54.024	65.491	1.00	35.91	C
ATOM	13064	CB	TYR	D	59	47.573	54.426	65.247	1.00	36.57	C
ATOM	13067	CG	TYR	D	59	48.572	53.328	65.088	1.00	37.04	C
ATOM	13068	CD1	TYR	D	59	49.590	53.425	64.103	1.00	40.41	C
ATOM	13070	CE1	TYR	D	59	50.555	52.505	63.961	1.00	38.26	C
ATOM	13072	CZ	TYR	D	59	50.592	51.439	64.807	1.00	36.55	C
ATOM	13073	OH	TYR	D	59	51.546	50.524	64.623	1.00	38.64	O
ATOM	13075	CE2	TYR	D	59	49.668	51.275	65.780	1.00	36.05	C
ATOM	13077	CD2	TYR	D	59	48.620	52.260	65.935	1.00	36.55	C
ATOM	13079	C	TYR	D	59	45.335	55.284	65.529	1.00	36.81	C
ATOM	13080	O	TYR	D	59	45.092	55.899	64.524	1.00	38.49	O
ATOM	13081	N	ASN	D	60	44.888	55.660	66.710	1.00	36.57	N
ATOM	13083	CA	ASN	D	60	44.107	56.894	66.906	1.00	38.17	C
ATOM	13085	CB	ASN	D	60	43.885	57.030	68.383	1.00	37.59	C
ATOM	13088	CG	ASN	D	60	42.742	57.873	68.742	1.00	39.27	C
ATOM	13089	OD1	ASN	D	60	42.025	58.492	67.928	1.00	42.52	O
ATOM	13090	ND2	ASN	D	60	42.533	57.895	70.029	1.00	40.55	N
ATOM	13093	C	ASN	D	60	44.905	58.075	66.418	1.00	39.85	C
ATOM	13094	O	ASN	D	60	46.085	58.121	66.619	1.00	40.65	O
ATOM	13095	N	THR	D	61	44.255	59.004	65.783	1.00	41.38	N
ATOM	13097	CA	THR	D	61	44.885	60.081	65.089	1.00	45.06	C
ATOM	13099	CB	THR	D	61	43.838	61.144	64.787	1.00	48.42	C
ATOM	13101	OG1	THR	D	61	42.731	60.516	64.121	1.00	47.87	O
ATOM	13103	CG2	THR	D	61	44.366	62.233	63.789	1.00	52.40	C
ATOM	13107	C	THR	D	61	46.027	60.733	65.763	1.00	46.36	C
ATOM	13108	O	THR	D	61	47.011	60.937	65.152	1.00	48.83	O
ATOM	13109	N	PRO	D	62	45.936	61.148	66.995	1.00	47.67	N
ATOM	13110	CA	PRO	D	62	47.106	61.814	67.621	1.00	49.35	C
ATOM	13112	CB	PRO	D	62	46.538	62.388	68.924	1.00	49.55	C
ATOM	13115	CG	PRO	D	62	45.387	61.448	69.263	1.00	47.57	C
ATOM	13118	CD	PRO	D	62	44.769	61.089	67.900	1.00	47.33	C
ATOM	13121	C	PRO	D	62	48.301	60.936	67.935	1.00	47.56	C
ATOM	13122	O	PRO	D	62	49.297	61.412	68.435	1.00	49.85	O
ATOM	13123	N	PHE	D	63	48.225	59.660	67.661	1.00	45.89	N
ATOM	13125	CA	PHE	D	63	49.354	58.776	67.922	1.00	45.48	C
ATOM	13127	CB	PHE	D	63	48.991	57.694	69.022	1.00	42.86	C
ATOM	13130	CG	PHE	D	63	48.348	58.264	70.261	1.00	41.77	C
ATOM	13131	CD1	PHE	D	63	46.985	58.211	70.441	1.00	37.08	C
ATOM	13133	CE1	PHE	D	63	46.398	58.790	71.575	1.00	38.67	C
ATOM	13135	CZ	PHE	D	63	47.145	59.418	72.527	1.00	37.15	C
ATOM	13137	CE2	PHE	D	63	48.487	59.515	72.346	1.00	41.21	C
ATOM	13139	CD2	PHE	D	63	49.109	58.935	71.211	1.00	41.81	C
ATOM	13141	C	PHE	D	63	49.802	58.127	66.601	1.00	46.08	C
ATOM	13142	O	PHE	D	63	50.622	57.230	66.587	1.00	46.42	O
ATOM	13143	N	THR	D	64	49.300	58.568	65.480	1.00	47.62	N
ATOM	13145	CA	THR	D	64	49.712	57.961	64.240	1.00	49.13	C
ATOM	13147	CB	THR	D	64	48.972	58.633	63.160	1.00	51.36	C
ATOM	13149	OG1	THR	D	64	47.638	58.085	63.156	1.00	50.94	O
ATOM	13151	CG2	THR	D	64	49.591	58.313	61.782	1.00	54.91	C
ATOM	13155	C	THR	D	64	51.210	58.114	63.990	1.00	52.42	C
ATOM	13156	O	THR	D	64	51.907	57.193	63.532	1.00	53.42	O
ATOM	13157	N	SER	D	65	51.737	59.289	64.303	1.00	54.78	N
ATOM	13159	CA	SER	D	65	53.053	59.604	63.833	1.00	56.59	C
ATOM	13161	CB	SER	D	65	53.251	61.158	63.765	1.00	60.91	C
ATOM	13164	OG	SER	D	65	53.283	61.827	65.066	1.00	60.68	O
ATOM	13166	C	SER	D	65	54.083	58.943	64.716	1.00	54.95	C

ATOM 13167	O	SER	D	65	55.308	59.151	64.511	1.00	58.96	O
ATOM 13168	N	ARG	D	66	53.650	58.240	65.753	1.00	50.49	N
ATOM 13170	CA	ARG	D	66	54.617	57.976	66.852	1.00	50.01	C
ATOM 13172	CB	ARG	D	66	54.716	59.163	67.832	1.00	50.28	C
ATOM 13175	CG	ARG	D	66	53.473	59.338	68.681	1.00	49.71	C
ATOM 13178	CD	ARG	D	66	53.310	60.748	69.279	1.00	52.47	C
ATOM 13181	NE	ARG	D	66	53.856	60.823	70.640	1.00	51.78	N
ATOM 13183	CZ	ARG	D	66	53.150	60.998	71.750	1.00	50.52	C
ATOM 13184	NH1	ARG	D	66	51.848	61.166	71.744	1.00	52.35	N
ATOM 13187	NH2	ARG	D	66	53.760	61.064	72.902	1.00	52.82	N
ATOM 13190	C	ARG	D	66	54.356	56.697	67.597	1.00	46.69	C
ATOM 13191	O	ARG	D	66	55.145	56.247	68.434	1.00	46.16	O
ATOM 13192	N	LEU	D	67	53.265	56.067	67.250	1.00	44.55	N
ATOM 13194	CA	LEU	D	67	52.930	54.840	67.913	1.00	42.69	C
ATOM 13196	CB	LEU	D	67	51.444	54.918	68.365	1.00	40.49	C
ATOM 13199	CG	LEU	D	67	50.806	53.736	69.049	1.00	39.68	C
ATOM 13201	CD1	LEU	D	67	51.766	53.114	70.010	1.00	41.91	C
ATOM 13205	CD2	LEU	D	67	49.535	54.112	69.731	1.00	39.30	C
ATOM 13209	C	LEU	D	67	53.301	53.694	66.939	1.00	42.23	C
ATOM 13210	O	LEU	D	67	53.187	53.803	65.722	1.00	41.99	O
ATOM 13211	N	SER	D	68	53.814	52.615	67.484	1.00	41.73	N
ATOM 13213	CA	SER	D	68	53.956	51.426	66.679	1.00	42.24	C
ATOM 13215	CB	SER	D	68	55.369	51.322	66.097	1.00	44.65	C
ATOM 13218	OG	SER	D	68	56.007	50.216	66.719	1.00	44.64	O
ATOM 13220	C	SER	D	68	53.670	50.202	67.537	1.00	40.14	C
ATOM 13221	O	SER	D	68	54.406	49.959	68.458	1.00	41.75	O
ATOM 13222	N	ILE	D	69	52.646	49.430	67.192	1.00	38.16	N
ATOM 13224	CA	ILE	D	69	52.444	48.115	67.777	1.00	37.76	C
ATOM 13226	CB	ILE	D	69	51.042	47.962	68.094	1.00	35.22	C
ATOM 13228	CG1	ILE	D	69	50.542	49.253	68.763	1.00	35.84	C
ATOM 13231	CD1	ILE	D	69	49.059	49.374	69.024	1.00	34.14	C
ATOM 13235	CG2	ILE	D	69	50.941	46.834	69.044	1.00	36.27	C
ATOM 13239	C	ILE	D	69	52.930	46.915	66.909	1.00	39.46	C
ATOM 13240	O	ILE	D	69	52.799	46.952	65.673	1.00	41.51	O
ATOM 13241	N	ASN	D	70	53.501	45.877	67.523	1.00	39.23	N
ATOM 13243	CA	ASN	D	70	53.977	44.715	66.762	1.00	41.63	C
ATOM 13245	CB	ASN	D	70	55.460	44.779	66.533	1.00	44.84	C
ATOM 13248	CG	ASN	D	70	55.800	45.718	65.434	1.00	49.17	C
ATOM 13249	OD1	ASN	D	70	55.575	45.399	64.289	1.00	55.81	O
ATOM 13250	ND2	ASN	D	70	56.256	46.927	65.763	1.00	52.56	N
ATOM 13253	C	ASN	D	70	53.631	43.453	67.469	1.00	40.86	C
ATOM 13254	O	ASN	D	70	53.133	43.517	68.548	1.00	40.73	O
ATOM 13255	N	LYS	D	71	53.824	42.299	66.872	1.00	41.57	N
ATOM 13257	CA	LYS	D	71	53.571	41.114	67.652	1.00	41.77	C
ATOM 13259	CB	LYS	D	71	52.089	40.784	67.647	1.00	39.31	C
ATOM 13262	CG	LYS	D	71	51.532	40.227	66.385	1.00	38.04	C
ATOM 13265	CD	LYS	D	71	49.962	40.233	66.402	1.00	37.00	C
ATOM 13268	CE	LYS	D	71	49.309	39.359	65.314	1.00	34.15	C
ATOM 13271	NZ	LYS	D	71	47.935	39.378	65.457	1.00	32.61	N
ATOM 13275	C	LYS	D	71	54.304	39.898	67.162	1.00	45.31	C
ATOM 13276	O	LYS	D	71	54.644	39.819	66.008	1.00	47.02	O
ATOM 13277	N	ASP	D	72	54.499	38.940	68.061	1.00	46.92	N
ATOM 13279	CA	ASP	D	72	54.911	37.579	67.731	1.00	49.86	C
ATOM 13281	CB	ASP	D	72	56.252	37.312	68.418	1.00	52.20	C
ATOM 13284	CG	ASP	D	72	56.857	36.047	67.966	1.00	58.26	C
ATOM 13285	OD1	ASP	D	72	56.033	35.215	67.531	1.00	59.63	O
ATOM 13286	OD2	ASP	D	72	58.108	35.774	67.965	1.00	67.49	O
ATOM 13287	C	ASP	D	72	53.816	36.496	68.102	1.00	48.55	C
ATOM 13288	O	ASP	D	72	53.706	36.125	69.270	1.00	48.20	O
ATOM 13289	N	ASN	D	73	53.015	36.002	67.142	1.00	47.65	N
ATOM 13291	CA	ASN	D	73	51.975	35.023	67.542	1.00	47.21	C
ATOM 13293	CB	ASN	D	73	50.978	34.570	66.476	1.00	45.48	C
ATOM 13296	CG	ASN	D	73	50.327	35.684	65.713	1.00	43.16	C
ATOM 13297	OD1	ASN	D	73	49.630	36.539	66.293	1.00	47.44	O
ATOM 13298	ND2	ASN	D	73	50.408	35.612	64.406	1.00	39.25	N
ATOM 13301	C	ASN	D	73	52.598	33.748	68.083	1.00	51.12	C
ATOM 13302	O	ASN	D	73	51.987	33.107	68.883	1.00	52.43	O
ATOM 13303	N	SER	D	74	53.773	33.318	67.643	1.00	54.87	N



ATOM	13305	CA	SER	D	74	54.397	32.122	68.317	1.00	58.74	C
ATOM	13307	CB	SER	D	74	55.773	31.817	67.787	1.00	62.13	C
ATOM	13310	OG	SER	D	74	55.629	31.667	66.404	1.00	65.94	O
ATOM	13312	C	SER	D	74	54.543	32.307	69.802	1.00	58.18	C
ATOM	13313	O	SER	D	74	54.129	31.462	70.531	1.00	60.18	O
ATOM	13314	N	LYS	D	75	55.131	33.421	70.238	1.00	56.43	N
ATOM	13316	CA	LYS	D	75	55.368	33.665	71.639	1.00	56.60	C
ATOM	13318	CB	LYS	D	75	56.566	34.600	71.806	1.00	57.02	C
ATOM	13321	CG	LYS	D	75	57.816	33.999	71.324	1.00	62.21	C
ATOM	13324	CD	LYS	D	75	58.969	34.990	71.079	1.00	65.08	C
ATOM	13327	CE	LYS	D	75	60.071	34.308	70.161	1.00	69.37	C
ATOM	13330	NZ	LYS	D	75	61.327	33.664	70.861	1.00	75.58	N
ATOM	13334	C	LYS	D	75	54.153	34.295	72.277	1.00	53.67	C
ATOM	13335	O	LYS	D	75	54.254	34.800	73.361	1.00	53.73	O
ATOM	13336	N	SER	D	76	52.997	34.249	71.621	1.00	52.05	N
ATOM	13338	CA	SER	D	76	51.836	35.122	71.941	1.00	48.62	C
ATOM	13340	CB	SER	D	76	50.739	34.328	72.636	1.00	48.74	C
ATOM	13343	OG	SER	D	76	51.376	33.677	73.649	1.00	52.34	O
ATOM	13345	C	SER	D	76	52.224	36.397	72.744	1.00	46.65	C
ATOM	13346	O	SER	D	76	51.862	36.571	73.915	1.00	45.12	O
ATOM	13347	N	GLN	D	77	52.938	37.285	72.056	1.00	45.21	N
ATOM	13349	CA	GLN	D	77	53.433	38.479	72.656	1.00	43.66	C
ATOM	13351	CB	GLN	D	77	54.970	38.339	72.814	1.00	46.88	C
ATOM	13354	CG	GLN	D	77	55.413	37.830	74.223	1.00	47.53	C
ATOM	13357	CD	GLN	D	77	56.927	37.700	74.397	1.00	49.35	C
ATOM	13358	OE1	GLN	D	77	57.662	37.900	73.452	1.00	49.14	O
ATOM	13359	NE2	GLN	D	77	57.377	37.335	75.607	1.00	49.80	N
ATOM	13362	C	GLN	D	77	53.046	39.686	71.801	1.00	40.90	C
ATOM	13363	O	GLN	D	77	53.118	39.637	70.599	1.00	39.78	O
ATOM	13364	N	VAL	D	78	52.621	40.767	72.441	1.00	39.44	N
ATOM	13366	CA	VAL	D	78	52.391	42.018	71.747	1.00	38.83	C
ATOM	13368	CB	VAL	D	78	51.002	42.480	71.899	1.00	36.73	C
ATOM	13370	CG1	VAL	D	78	50.881	43.889	71.317	1.00	36.47	C
ATOM	13374	CG2	VAL	D	78	50.060	41.533	71.152	1.00	36.98	C
ATOM	13378	C	VAL	D	78	53.269	43.132	72.259	1.00	39.68	C
ATOM	13379	O	VAL	D	78	53.417	43.313	73.430	1.00	41.11	O
ATOM	13380	N	PHE	D	79	53.852	43.887	71.350	1.00	41.21	N
ATOM	13382	CA	PHE	D	79	54.922	44.885	71.657	1.00	42.91	C
ATOM	13384	CB	PHE	D	79	56.198	44.576	70.873	1.00	44.00	C
ATOM	13387	CG	PHE	D	79	56.685	43.209	71.048	1.00	44.41	C
ATOM	13388	CD1	PHE	D	79	56.809	42.361	69.986	1.00	44.33	C
ATOM	13390	CE1	PHE	D	79	57.312	41.097	70.146	1.00	44.84	C
ATOM	13392	CZ	PHE	D	79	57.692	40.655	71.360	1.00	46.86	C
ATOM	13394	CE2	PHE	D	79	57.625	41.481	72.428	1.00	47.48	C
ATOM	13396	CD2	PHE	D	79	57.110	42.779	72.274	1.00	47.39	C
ATOM	13398	C	PHE	D	79	54.451	46.315	71.284	1.00	41.27	C
ATOM	13399	O	PHE	D	79	54.445	46.684	70.135	1.00	41.52	O
ATOM	13400	N	PHE	D	80	54.052	47.086	72.266	1.00	40.35	N
ATOM	13402	CA	PHE	D	80	53.562	48.422	72.037	1.00	39.60	C
ATOM	13404	CB	PHE	D	80	52.521	48.721	73.090	1.00	38.21	C
ATOM	13407	CG	PHE	D	80	52.216	50.165	73.261	1.00	37.90	C
ATOM	13408	CD1	PHE	D	80	51.021	50.680	72.821	1.00	35.78	C
ATOM	13410	CE1	PHE	D	80	50.725	51.977	73.032	1.00	34.24	C
ATOM	13412	CZ	PHE	D	80	51.553	52.761	73.706	1.00	33.92	C
ATOM	13414	CE2	PHE	D	80	52.672	52.283	74.183	1.00	37.81	C
ATOM	13416	CD2	PHE	D	80	53.045	50.982	73.964	1.00	37.72	C
ATOM	13418	C	PHE	D	80	54.725	49.303	72.235	1.00	41.55	C
ATOM	13419	O	PHE	D	80	55.430	49.157	73.215	1.00	42.98	O
ATOM	13420	N	LYS	D	81	54.956	50.208	71.309	1.00	42.00	N
ATOM	13422	CA	LYS	D	81	56.094	51.126	71.444	1.00	43.52	C
ATOM	13424	CB	LYS	D	81	57.243	50.693	70.573	1.00	45.25	C
ATOM	13427	CG	LYS	D	81	58.519	51.595	70.732	1.00	48.35	C
ATOM	13430	CD	LYS	D	81	59.776	51.198	69.903	1.00	49.70	C
ATOM	13433	CE	LYS	D	81	60.773	52.392	69.816	1.00	53.14	C
ATOM	13436	NZ	LYS	D	81	62.159	52.008	69.543	1.00	55.94	N
ATOM	13440	C	LYS	D	81	55.604	52.514	71.033	1.00	43.91	C
ATOM	13441	O	LYS	D	81	54.940	52.640	69.988	1.00	44.59	O
ATOM	13442	N	MET	D	82	55.837	53.535	71.861	1.00	44.38	N

ATOM 13444	CA	MET	D	82	55.448	54.904	71.496	1.00	45.09	C
ATOM 13446	CB	MET	D	82	54.343	55.408	72.393	1.00	44.28	C
ATOM 13449	CG	MET	D	82	54.024	56.895	72.173	1.00	45.85	C
ATOM 13452	SD	MET	D	82	52.329	57.187	72.824	1.00	47.44	S
ATOM 13453	CE	MET	D	82	52.586	57.665	74.489	1.00	46.84	C
ATOM 13457	C	MET	D	82	56.604	55.815	71.643	1.00	47.35	C
ATOM 13458	O	MET	D	82	57.299	55.728	72.615	1.00	47.79	O
ATOM 13459	N	ASN	D	83	56.792	56.728	70.704	1.00	49.56	N
ATOM 13461	CA	ASN	D	83	58.009	57.562	70.660	1.00	52.90	C
ATOM 13463	CB	ASN	D	83	58.447	57.777	69.202	1.00	55.93	C
ATOM 13466	CG	ASN	D	83	58.932	56.492	68.511	1.00	58.70	C
ATOM 13467	OD1	ASN	D	83	59.525	55.600	69.150	1.00	60.92	O
ATOM 13468	ND2	ASN	D	83	58.724	56.428	67.175	1.00	62.10	N
ATOM 13471	C	ASN	D	83	57.828	58.935	71.279	1.00	53.16	C
ATOM 13472	O	ASN	D	83	56.723	59.418	71.428	1.00	50.57	O
ATOM 13473	N	SER	D	84	58.938	59.578	71.592	1.00	56.13	N
ATOM 13475	CA	SER	D	84	58.927	60.981	72.007	1.00	58.85	C
ATOM 13477	CB	SER	D	84	58.743	61.821	70.818	1.00	60.49	C
ATOM 13480	OG	SER	D	84	59.650	61.296	69.902	1.00	66.30	O
ATOM 13482	C	SER	D	84	57.859	61.347	72.991	1.00	57.53	C
ATOM 13483	O	SER	D	84	56.903	62.028	72.657	1.00	57.77	O
ATOM 13484	N	LEU	D	85	58.044	60.895	74.219	1.00	56.64	N
ATOM 13486	CA	LEU	D	85	57.070	61.114	75.227	1.00	55.13	C
ATOM 13488	CB	LEU	D	85	57.161	60.009	76.274	1.00	53.82	C
ATOM 13491	CG	LEU	D	85	56.234	58.846	75.910	1.00	50.98	C
ATOM 13493	CD1	LEU	D	85	56.953	57.991	74.900	1.00	52.48	C
ATOM 13497	CD2	LEU	D	85	55.847	58.046	77.151	1.00	49.77	C
ATOM 13501	C	LEU	D	85	57.320	62.484	75.826	1.00	57.61	C
ATOM 13502	O	LEU	D	85	58.423	62.985	75.802	1.00	60.21	O
ATOM 13503	N	GLN	D	86	56.247	63.093	76.298	1.00	56.61	N
ATOM 13505	CA	GLN	D	86	56.287	64.342	77.012	1.00	58.88	C
ATOM 13507	CB	GLN	D	86	55.661	65.449	76.174	1.00	60.42	C
ATOM 13510	CG	GLN	D	86	56.455	65.786	74.922	1.00	62.18	C
ATOM 13513	CD	GLN	D	86	57.886	66.248	75.220	1.00	64.34	C
ATOM 13514	OE1	GLN	D	86	58.158	66.968	76.214	1.00	62.43	O
ATOM 13515	NE2	GLN	D	86	58.800	65.806	74.377	1.00	62.47	N
ATOM 13518	C	GLN	D	86	55.487	64.077	78.249	1.00	56.98	C
ATOM 13519	O	GLN	D	86	55.039	62.988	78.450	1.00	53.19	O
ATOM 13520	N	SER	D	87	55.323	65.069	79.089	1.00	59.59	N
ATOM 13522	CA	SER	D	87	54.745	64.812	80.381	1.00	59.57	C
ATOM 13524	CB	SER	D	87	55.036	65.975	81.289	1.00	63.01	C
ATOM 13527	OG	SER	D	87	54.389	67.041	80.689	1.00	67.52	O
ATOM 13529	C	SER	D	87	53.258	64.544	80.272	1.00	57.33	C
ATOM 13530	O	SER	D	87	52.767	63.721	81.021	1.00	55.78	O
ATOM 13531	N	ASN	D	88	52.563	65.209	79.329	1.00	58.66	N
ATOM 13533	CA	ASN	D	88	51.256	64.748	78.718	1.00	56.25	C
ATOM 13535	CB	ASN	D	88	51.180	65.170	77.247	1.00	57.45	C
ATOM 13538	CG	ASN	D	88	50.876	66.580	77.067	1.00	62.84	C
ATOM 13539	OD1	ASN	D	88	50.883	67.306	78.041	1.00	74.09	O
ATOM 13540	ND2	ASN	D	88	50.533	67.012	75.831	1.00	63.95	N
ATOM 13543	C	ASN	D	88	51.038	63.237	78.581	1.00	52.90	C
ATOM 13544	O	ASN	D	88	49.916	62.814	78.417	1.00	52.43	O
ATOM 13545	N	ASP	D	89	52.092	62.440	78.501	1.00	51.41	N
ATOM 13547	CA	ASP	D	89	51.949	61.018	78.388	1.00	49.06	C
ATOM 13549	CB	ASP	D	89	52.926	60.536	77.355	1.00	49.14	C
ATOM 13552	CG	ASP	D	89	52.744	61.234	76.046	1.00	51.56	C
ATOM 13553	OD1	ASP	D	89	51.627	61.127	75.481	1.00	51.32	O
ATOM 13554	OD2	ASP	D	89	53.661	61.899	75.486	1.00	54.26	O
ATOM 13555	C	ASP	D	89	52.113	60.193	79.688	1.00	49.01	C
ATOM 13556	O	ASP	D	89	52.119	58.945	79.650	1.00	47.85	O
ATOM 13557	N	THR	D	90	52.206	60.851	80.847	1.00	51.07	N
ATOM 13559	CA	THR	D	90	52.121	60.112	82.141	1.00	49.85	C
ATOM 13561	CB	THR	D	90	52.273	61.030	83.288	1.00	51.99	C
ATOM 13563	OG1	THR	D	90	53.571	61.636	83.183	1.00	57.36	O
ATOM 13565	CG2	THR	D	90	52.303	60.281	84.588	1.00	51.56	C
ATOM 13569	C	THR	D	90	50.773	59.577	82.214	1.00	47.11	C
ATOM 13570	O	THR	D	90	49.808	60.323	81.988	1.00	47.64	O
ATOM 13571	N	ALA	D	91	50.695	58.289	82.502	1.00	45.03	N

ATOM 13573	CA	ALA	D	91	49.405	57.551	82.488	1.00	42.38	C
ATOM 13575	CB	ALA	D	91	48.762	57.590	81.130	1.00	41.09	C
ATOM 13579	C	ALA	D	91	49.640	56.147	82.851	1.00	40.25	C
ATOM 13580	O	ALA	D	91	50.767	55.723	82.869	1.00	41.74	O
ATOM 13581	N	ILE	D	92	48.576	55.431	83.165	1.00	38.65	N
ATOM 13583	CA	ILE	D	92	48.616	53.982	83.189	1.00	36.52	C
ATOM 13585	CB	ILE	D	92	47.692	53.500	84.265	1.00	37.41	C
ATOM 13587	CG1	ILE	D	92	48.318	53.873	85.587	1.00	39.88	C
ATOM 13590	CD1	ILE	D	92	47.426	54.065	86.604	1.00	43.89	C
ATOM 13594	CG2	ILE	D	92	47.526	52.047	84.213	1.00	36.13	C
ATOM 13598	C	ILE	D	92	48.310	53.461	81.803	1.00	33.73	C
ATOM 13599	O	ILE	D	92	47.290	53.775	81.214	1.00	32.00	O
ATOM 13600	N	TYR	D	93	49.248	52.737	81.244	1.00	33.28	N
ATOM 13602	CA	TYR	D	93	49.012	52.153	79.948	1.00	32.94	C
ATOM 13604	CB	TYR	D	93	50.261	52.260	79.101	1.00	32.51	C
ATOM 13607	CG	TYR	D	93	50.564	53.690	78.742	1.00	35.57	C
ATOM 13608	CD1	TYR	D	93	50.996	54.606	79.683	1.00	38.55	C
ATOM 13610	CE1	TYR	D	93	51.271	55.942	79.320	1.00	40.44	C
ATOM 13612	CZ	TYR	D	93	51.095	56.353	78.008	1.00	38.75	C
ATOM 13613	OH	TYR	D	93	51.301	57.632	77.620	1.00	36.83	O
ATOM 13615	CE2	TYR	D	93	50.676	55.468	77.070	1.00	37.22	C
ATOM 13617	CD2	TYR	D	93	50.386	54.151	77.450	1.00	37.91	C
ATOM 13619	C	TYR	D	93	48.527	50.698	80.099	1.00	32.47	C
ATOM 13620	O	TYR	D	93	49.158	49.906	80.771	1.00	33.93	O
ATOM 13621	N	TYR	D	94	47.412	50.374	79.461	1.00	31.81	N
ATOM 13623	CA	TYR	D	94	46.790	49.071	79.509	1.00	31.89	C
ATOM 13625	CB	TYR	D	94	45.316	49.180	79.927	1.00	31.43	C
ATOM 13628	CG	TYR	D	94	45.044	49.623	81.317	1.00	34.26	C
ATOM 13629	CD1	TYR	D	94	44.722	50.933	81.611	1.00	34.32	C
ATOM 13631	CE1	TYR	D	94	44.471	51.333	82.955	1.00	37.87	C
ATOM 13633	CZ	TYR	D	94	44.541	50.406	83.981	1.00	40.08	C
ATOM 13634	OH	TYR	D	94	44.302	50.719	85.322	1.00	44.06	O
ATOM 13636	CE2	TYR	D	94	44.840	49.120	83.681	1.00	39.37	C
ATOM 13638	CD2	TYR	D	94	45.065	48.720	82.362	1.00	37.60	C
ATOM 13640	C	TYR	D	94	46.766	48.458	78.114	1.00	31.19	C
ATOM 13641	O	TYR	D	94	46.595	49.162	77.134	1.00	28.84	O
ATOM 13642	N	CYS	D	95	46.803	47.114	78.094	1.00	32.31	N
ATOM 13644	CA	CYS	D	95	46.343	46.326	76.978	1.00	31.63	C
ATOM 13646	CB	CYS	D	95	47.407	45.367	76.555	1.00	32.86	C
ATOM 13649	SG	CYS	D	95	47.837	44.087	77.682	1.00	36.32	S
ATOM 13650	C	CYS	D	95	45.043	45.595	77.229	1.00	31.81	C
ATOM 13651	O	CYS	D	95	44.543	45.489	78.338	1.00	32.84	O
ATOM 13652	N	ALA	D	96	44.415	45.138	76.170	1.00	31.66	N
ATOM 13654	CA	ALA	D	96	43.065	44.613	76.333	1.00	31.98	C
ATOM 13656	CB	ALA	D	96	42.067	45.738	76.560	1.00	31.73	C
ATOM 13660	C	ALA	D	96	42.610	43.789	75.189	1.00	31.15	C
ATOM 13661	O	ALA	D	96	43.109	43.916	74.113	1.00	30.28	O
ATOM 13662	N	ARG	D	97	41.644	42.929	75.459	1.00	31.57	N
ATOM 13664	CA	ARG	D	97	41.056	42.132	74.424	1.00	31.04	C
ATOM 13666	CB	ARG	D	97	41.403	40.657	74.529	1.00	31.65	C
ATOM 13669	CG	ARG	D	97	41.364	39.961	73.252	1.00	30.26	C
ATOM 13672	CD	ARG	D	97	41.106	38.522	73.380	1.00	33.63	C
ATOM 13675	NE	ARG	D	97	39.673	38.270	73.544	1.00	35.37	N
ATOM 13677	CZ	ARG	D	97	39.119	37.052	73.723	1.00	37.21	C
ATOM 13678	NH1	ARG	D	97	39.855	35.971	73.753	1.00	39.36	N
ATOM 13681	NH2	ARG	D	97	37.797	36.905	73.786	1.00	38.08	N
ATOM 13684	C	ARG	D	97	39.632	42.302	74.578	1.00	30.96	C
ATOM 13685	O	ARG	D	97	39.130	42.243	75.686	1.00	31.79	O
ATOM 13686	N	ALA	D	98	38.981	42.482	73.441	1.00	30.39	N
ATOM 13688	CA	ALA	D	98	37.540	42.481	73.374	1.00	30.35	C
ATOM 13690	CB	ALA	D	98	37.141	42.731	71.958	1.00	30.65	C
ATOM 13694	C	ALA	D	98	36.991	41.140	73.769	1.00	31.90	C
ATOM 13695	O	ALA	D	98	37.675	40.141	73.670	1.00	31.68	O
ATOM 13696	N	LEU	D	99	35.719	41.124	74.134	1.00	33.49	N
ATOM 13698	CA	LEU	D	99	34.995	39.875	74.405	1.00	35.36	C
ATOM 13700	CB	LEU	D	99	33.719	40.195	75.166	1.00	36.53	C
ATOM 13703	CG	LEU	D	99	32.855	39.064	75.632	1.00	37.57	C
ATOM 13705	CD1	LEU	D	99	33.465	38.470	76.786	1.00	39.95	C

ATOM 13709	CD2	LEU	D	99	31.538	39.533	75.980	1.00	38.23	C
ATOM 13713	C	LEU	D	99	34.636	39.123	73.129	1.00	34.97	C
ATOM 13714	O	LEU	D	99	34.376	37.955	73.165	1.00	38.11	O
ATOM 13715	N	THR	D	100	34.604	39.801	72.007	1.00	33.14	N
ATOM 13717	CA	THR	D	100	34.004	39.285	70.772	1.00	32.28	C
ATOM 13719	CB	THR	D	100	32.617	39.874	70.631	1.00	33.08	C
ATOM 13721	OG1	THR	D	100	31.693	39.072	71.380	1.00	32.58	O
ATOM 13723	CG2	THR	D	100	32.098	39.948	69.118	1.00	37.21	C
ATOM 13727	C	THR	D	100	34.873	39.702	69.604	1.00	31.13	C
ATOM 13728	O	THR	D	100	35.471	40.785	69.620	1.00	30.37	O
ATOM 13729	N	TYR	D	101	34.993	38.833	68.611	1.00	31.37	N
ATOM 13731	CA	TYR	D	101	35.703	39.160	67.419	1.00	30.84	C
ATOM 13733	CB	TYR	D	101	35.437	38.137	66.314	1.00	32.08	C
ATOM 13736	CG	TYR	D	101	35.629	36.729	66.805	1.00	34.25	C
ATOM 13737	CD1	TYR	D	101	34.583	35.941	67.097	1.00	38.88	C
ATOM 13739	CE1	TYR	D	101	34.750	34.707	67.562	1.00	39.52	C
ATOM 13741	CZ	TYR	D	101	35.946	34.269	67.763	1.00	38.52	C
ATOM 13742	OH	TYR	D	101	36.095	33.043	68.238	1.00	44.46	O
ATOM 13744	CE2	TYR	D	101	36.986	34.992	67.497	1.00	36.82	C
ATOM 13746	CD2	TYR	D	101	36.835	36.231	67.048	1.00	35.53	C
ATOM 13748	C	TYR	D	101	35.277	40.529	66.932	1.00	30.86	C
ATOM 13749	O	TYR	D	101	34.084	40.893	66.955	1.00	33.11	O
ATOM 13750	N	TYR	D	102	36.280	41.279	66.517	1.00	29.81	N
ATOM 13752	CA	TYR	D	102	36.191	42.562	65.853	1.00	29.45	C
ATOM 13754	CB	TYR	D	102	35.565	42.386	64.481	1.00	30.72	C
ATOM 13757	CG	TYR	D	102	36.154	41.295	63.698	1.00	28.52	C
ATOM 13758	CD1	TYR	D	102	35.328	40.351	63.085	1.00	32.83	C
ATOM 13760	CE1	TYR	D	102	35.834	39.306	62.287	1.00	32.70	C
ATOM 13762	CZ	TYR	D	102	37.178	39.172	62.157	1.00	29.94	C
ATOM 13763	OH	TYR	D	102	37.581	38.164	61.424	1.00	30.00	O
ATOM 13765	CE2	TYR	D	102	38.019	40.076	62.744	1.00	29.21	C
ATOM 13767	CD2	TYR	D	102	37.461	41.196	63.511	1.00	26.98	C
ATOM 13769	C	TYR	D	102	35.564	43.702	66.606	1.00	29.34	C
ATOM 13770	O	TYR	D	102	35.211	44.753	65.993	1.00	31.06	O
ATOM 13771	N	ASP	D	103	35.453	43.560	67.911	1.00	29.51	N
ATOM 13773	CA	ASP	D	103	34.621	44.510	68.693	1.00	31.57	C
ATOM 13775	CB	ASP	D	103	33.523	43.743	69.392	1.00	32.31	C
ATOM 13778	CG	ASP	D	103	32.231	44.541	69.603	1.00	35.50	C
ATOM 13779	OD1	ASP	D	103	32.229	45.811	69.699	1.00	37.86	O
ATOM 13780	OD2	ASP	D	103	31.147	43.932	69.760	1.00	33.03	O
ATOM 13781	C	ASP	D	103	35.493	45.285	69.688	1.00	31.31	C
ATOM 13782	O	ASP	D	103	36.726	45.130	69.654	1.00	30.80	O
ATOM 13783	N	TYR	D	104	34.867	46.062	70.572	1.00	32.47	N
ATOM 13785	CA	TYR	D	104	35.564	47.042	71.419	1.00	33.02	C
ATOM 13787	CB	TYR	D	104	35.387	48.429	70.847	1.00	32.52	C
ATOM 13790	CG	TYR	D	104	35.855	48.529	69.452	1.00	32.49	C
ATOM 13791	CD1	TYR	D	104	35.051	48.168	68.386	1.00	34.38	C
ATOM 13793	CE1	TYR	D	104	35.511	48.235	67.060	1.00	36.47	C
ATOM 13795	CZ	TYR	D	104	36.784	48.661	66.851	1.00	40.26	C
ATOM 13796	OH	TYR	D	104	37.335	48.820	65.555	1.00	42.04	O
ATOM 13798	CE2	TYR	D	104	37.581	48.984	67.959	1.00	36.79	C
ATOM 13800	CD2	TYR	D	104	37.121	48.927	69.194	1.00	32.46	C
ATOM 13802	C	TYR	D	104	35.042	47.079	72.872	1.00	35.19	C
ATOM 13803	O	TYR	D	104	35.119	48.144	73.559	1.00	36.99	O
ATOM 13804	N	GLU	D	105	34.624	45.896	73.331	1.00	35.25	N
ATOM 13806	CA	GLU	D	105	33.892	45.637	74.609	1.00	37.05	C
ATOM 13808	CB	GLU	D	105	32.653	44.759	74.311	1.00	38.39	C
ATOM 13811	CG	GLU	D	105	33.162	43.726	73.210	1.00	39.20	C
ATOM 13814	CD	GLU	D	105	32.119	42.797	72.800	1.00	43.24	C
ATOM 13815	OE1	GLU	D	105	30.967	43.102	73.166	1.00	50.60	O
ATOM 13816	OE2	GLU	D	105	32.424	41.815	72.145	1.00	41.17	O
ATOM 13817	C	GLU	D	105	34.955	44.885	75.449	1.00	34.79	C
ATOM 13818	O	GLU	D	105	35.096	43.674	75.450	1.00	33.21	O
ATOM 13819	N	PHE	D	106	35.794	45.663	76.079	1.00	34.74	N
ATOM 13821	CA	PHE	D	106	36.971	45.106	76.719	1.00	33.56	C
ATOM 13823	CB	PHE	D	106	37.941	46.202	76.907	1.00	32.11	C
ATOM 13826	CG	PHE	D	106	38.218	46.917	75.658	1.00	32.00	C
ATOM 13827	CD1	PHE	D	106	38.095	48.287	75.563	1.00	36.38	C

ATOM	13829	CE1	PHE	D	106	38.440	48.935	74.393	1.00	34.66	C
ATOM	13831	CZ	PHE	D	106	38.862	48.191	73.304	1.00	30.31	C
ATOM	13833	CE2	PHE	D	106	38.918	46.865	73.389	1.00	29.09	C
ATOM	13835	CD2	PHE	D	106	38.605	46.234	74.565	1.00	30.59	C
ATOM	13837	C	PHE	D	106	36.657	44.375	78.016	1.00	34.43	C
ATOM	13838	O	PHE	D	106	36.441	44.995	79.034	1.00	36.37	O
ATOM	13839	N	ALA	D	107	36.649	43.050	77.934	1.00	33.57	N
ATOM	13841	CA	ALA	D	107	36.320	42.181	79.035	1.00	35.28	C
ATOM	13843	CB	ALA	D	107	35.614	40.888	78.539	1.00	35.86	C
ATOM	13847	C	ALA	D	107	37.554	41.780	79.759	1.00	35.97	C
ATOM	13848	O	ALA	D	107	37.409	41.351	80.903	1.00	38.66	O
ATOM	13849	N	TYR	D	108	38.716	41.898	79.101	1.00	33.76	N
ATOM	13851	CA	TYR	D	108	39.993	41.378	79.567	1.00	34.96	C
ATOM	13853	CB	TYR	D	108	40.460	40.163	78.709	1.00	34.47	C
ATOM	13856	CG	TYR	D	108	39.440	39.099	78.601	1.00	35.04	C
ATOM	13857	CD1	TYR	D	108	38.726	38.850	77.407	1.00	35.31	C
ATOM	13859	CE1	TYR	D	108	37.743	37.862	77.365	1.00	35.79	C
ATOM	13861	CZ	TYR	D	108	37.474	37.182	78.535	1.00	38.03	C
ATOM	13862	OH	TYR	D	108	36.533	36.206	78.654	1.00	44.30	O
ATOM	13864	CE2	TYR	D	108	38.152	37.435	79.680	1.00	38.12	C
ATOM	13866	CD2	TYR	D	108	39.139	38.355	79.697	1.00	37.41	C
ATOM	13868	C	TYR	D	108	41.038	42.466	79.377	1.00	34.37	C
ATOM	13869	O	TYR	D	108	41.156	42.969	78.276	1.00	33.58	O
ATOM	13870	N	TRP	D	109	41.817	42.778	80.431	1.00	35.51	N
ATOM	13872	CA	TRP	D	109	42.755	43.898	80.499	1.00	33.04	C
ATOM	13874	CB	TRP	D	109	42.188	45.019	81.373	1.00	33.12	C
ATOM	13877	CG	TRP	D	109	40.965	45.716	80.852	1.00	33.03	C
ATOM	13878	CD1	TRP	D	109	39.735	45.182	80.686	1.00	35.04	C
ATOM	13880	NE1	TRP	D	109	38.877	46.105	80.136	1.00	35.58	N
ATOM	13882	CE2	TRP	D	109	39.559	47.266	79.932	1.00	33.94	C
ATOM	13883	CD2	TRP	D	109	40.878	47.049	80.343	1.00	33.28	C
ATOM	13884	CE3	TRP	D	109	41.789	48.075	80.166	1.00	33.80	C
ATOM	13886	CZ3	TRP	D	109	41.349	49.277	79.611	1.00	33.42	C
ATOM	13888	CH2	TRP	D	109	40.051	49.447	79.228	1.00	33.69	C
ATOM	13890	CZ2	TRP	D	109	39.129	48.465	79.401	1.00	33.31	C
ATOM	13892	C	TRP	D	109	43.970	43.405	81.176	1.00	34.87	C
ATOM	13893	O	TRP	D	109	43.919	42.614	82.081	1.00	37.35	O
ATOM	13894	N	GLY	D	110	45.108	43.904	80.769	1.00	35.09	N
ATOM	13896	CA	GLY	D	110	46.304	43.773	81.543	1.00	35.48	C
ATOM	13899	C	GLY	D	110	46.167	44.509	82.858	1.00	36.71	C
ATOM	13900	O	GLY	D	110	45.170	45.206	83.165	1.00	35.65	O
ATOM	13901	N	GLN	D	111	47.194	44.292	83.674	1.00	38.41	N
ATOM	13903	CA	GLN	D	111	47.290	44.909	84.986	1.00	39.88	C
ATOM	13905	CB	GLN	D	111	48.241	44.104	85.886	1.00	42.53	C
ATOM	13908	CG	GLN	D	111	49.725	44.447	85.776	1.00	42.86	C
ATOM	13911	CD	GLN	D	111	50.463	43.616	84.777	1.00	41.89	C
ATOM	13912	OE1	GLN	D	111	51.637	43.438	84.917	1.00	44.32	O
ATOM	13913	NE2	GLN	D	111	49.790	43.179	83.713	1.00	41.71	N
ATOM	13916	C	GLN	D	111	47.694	46.381	84.902	1.00	38.77	C
ATOM	13917	O	GLN	D	111	47.649	47.095	85.877	1.00	40.58	O
ATOM	13918	N	GLY	D	112	48.078	46.845	83.738	1.00	36.79	N
ATOM	13920	CA	GLY	D	112	48.429	48.224	83.606	1.00	37.21	C
ATOM	13923	C	GLY	D	112	49.899	48.474	83.858	1.00	39.24	C
ATOM	13924	O	GLY	D	112	50.520	47.788	84.674	1.00	42.52	O
ATOM	13925	N	THR	D	113	50.463	49.436	83.139	1.00	38.68	N
ATOM	13927	CA	THR	D	113	51.785	49.879	83.417	1.00	41.03	C
ATOM	13929	CB	THR	D	113	52.612	49.719	82.180	1.00	40.97	C
ATOM	13931	OG1	THR	D	113	52.785	48.325	81.891	1.00	40.85	O
ATOM	13933	CG2	THR	D	113	54.036	50.254	82.416	1.00	42.53	C
ATOM	13937	C	THR	D	113	51.750	51.353	83.870	1.00	42.14	C
ATOM	13938	O	THR	D	113	51.250	52.198	83.134	1.00	40.31	O
ATOM	13939	N	LEU	D	114	52.270	51.637	85.076	1.00	44.50	N
ATOM	13941	CA	LEU	D	114	52.295	52.984	85.606	1.00	45.15	C
ATOM	13943	CB	LEU	D	114	52.560	52.927	87.087	1.00	47.24	C
ATOM	13946	CG	LEU	D	114	52.578	54.312	87.753	1.00	48.79	C
ATOM	13948	CD1	LEU	D	114	51.232	54.921	87.733	1.00	49.87	C
ATOM	13952	CD2	LEU	D	114	53.087	54.296	89.213	1.00	51.70	C
ATOM	13956	C	LEU	D	114	53.444	53.717	84.956	1.00	46.43	C

ATOM 13957	O	LEU	D	114	54.584	53.494	85.359	1.00	48.45	O
ATOM 13958	N	VAL	D	115	53.174	54.617	84.008	1.00	44.80	N
ATOM 13960	CA	VAL	D	115	54.248	55.285	83.274	1.00	45.32	C
ATOM 13962	CB	VAL	D	115	53.999	55.303	81.781	1.00	43.97	C
ATOM 13964	CG1	VAL	D	115	55.038	56.092	81.076	1.00	45.37	C
ATOM 13968	CG2	VAL	D	115	54.011	53.915	81.240	1.00	45.06	C
ATOM 13972	C	VAL	D	115	54.332	56.717	83.635	1.00	46.21	C
ATOM 13973	O	VAL	D	115	53.342	57.421	83.507	1.00	46.25	O
ATOM 13974	N	THR	D	116	55.549	57.149	83.931	1.00	47.39	N
ATOM 13976	CA	THR	D	116	55.876	58.442	84.504	1.00	49.19	C
ATOM 13978	CB	THR	D	116	56.559	58.139	85.826	1.00	51.28	C
ATOM 13980	OG1	THR	D	116	55.851	57.040	86.446	1.00	49.66	O
ATOM 13982	CG2	THR	D	116	56.561	59.345	86.814	1.00	52.90	C
ATOM 13986	C	THR	D	116	56.870	59.154	83.611	1.00	50.16	C
ATOM 13987	O	THR	D	116	57.880	58.600	83.330	1.00	50.46	O
ATOM 13988	N	VAL	D	117	56.626	60.382	83.209	1.00	50.68	N
ATOM 13990	CA	VAL	D	117	57.511	61.021	82.292	1.00	52.90	C
ATOM 13992	CB	VAL	D	117	56.786	61.424	81.067	1.00	52.02	C
ATOM 13994	CG1	VAL	D	117	57.669	62.056	80.124	1.00	54.34	C
ATOM 13998	CG2	VAL	D	117	56.235	60.219	80.389	1.00	51.45	C
ATOM 14002	C	VAL	D	117	58.169	62.215	82.941	1.00	57.15	C
ATOM 14003	O	VAL	D	117	57.575	63.264	83.139	1.00	59.15	O
ATOM 14004	N	SER	D	118	59.443	62.064	83.257	1.00	59.82	N
ATOM 14006	CA	SER	D	118	60.162	63.096	83.950	1.00	63.47	C
ATOM 14008	CB	SER	D	118	59.855	62.996	85.452	1.00	63.79	C
ATOM 14011	OG	SER	D	118	60.736	63.764	86.268	1.00	66.67	O
ATOM 14013	C	SER	D	118	61.614	62.834	83.640	1.00	66.29	C
ATOM 14014	O	SER	D	118	62.005	61.685	83.390	1.00	64.91	O
ATOM 14015	N	ALA	D	119	62.406	63.899	83.602	1.00	54.31	N
ATOM 14017	CA	ALA	D	119	63.822	63.741	83.347	1.00	55.75	C
ATOM 14019	CB	ALA	D	119	64.349	64.894	82.555	1.00	57.76	C
ATOM 14023	C	ALA	D	119	64.549	63.610	84.672	1.00	55.45	C
ATOM 14024	O	ALA	D	119	65.775	63.529	84.729	1.00	56.97	O
ATOM 14025	N	ALA	D	120	63.807	63.582	85.753	1.00	53.85	N
ATOM 14027	CA	ALA	D	120	64.453	63.464	87.038	1.00	53.86	C
ATOM 14029	CB	ALA	D	120	63.469	63.824	88.155	1.00	53.59	C
ATOM 14033	C	ALA	D	120	64.930	62.055	87.236	1.00	53.49	C
ATOM 14034	O	ALA	D	120	64.510	61.091	86.561	1.00	52.47	O
ATOM 14035	N	SER	D	121	65.770	61.966	88.241	1.00	54.49	N
ATOM 14037	CA	SER	D	121	66.445	60.753	88.607	1.00	55.63	C
ATOM 14039	CB	SER	D	121	67.839	61.096	89.074	1.00	58.28	C
ATOM 14042	OG	SER	D	121	67.715	61.672	90.340	1.00	57.66	O
ATOM 14044	C	SER	D	121	65.723	60.084	89.756	1.00	54.50	C
ATOM 14045	O	SER	D	121	65.234	60.737	90.667	1.00	54.17	O
ATOM 14046	N	THR	D	122	65.671	58.761	89.676	1.00	54.53	N
ATOM 14048	CA	THR	D	122	65.177	57.902	90.720	1.00	53.23	C
ATOM 14050	CB	THR	D	122	65.387	56.504	90.241	1.00	54.78	C
ATOM 14052	OG1	THR	D	122	64.463	56.273	89.190	1.00	52.62	O
ATOM 14054	CG2	THR	D	122	65.040	55.501	91.265	1.00	55.87	C
ATOM 14058	C	THR	D	122	65.900	58.103	92.036	1.00	54.14	C
ATOM 14059	O	THR	D	122	67.082	58.370	92.070	1.00	57.74	O
ATOM 14060	N	LYS	D	123	65.155	57.970	93.101	1.00	52.70	N
ATOM 14062	CA	LYS	D	123	65.617	58.079	94.434	1.00	54.77	C
ATOM 14064	CB	LYS	D	123	65.602	59.545	94.866	1.00	55.21	C
ATOM 14067	CG	LYS	D	123	65.630	59.764	96.421	1.00	58.84	C
ATOM 14070	CD	LYS	D	123	66.294	61.098	96.875	1.00	62.89	C
ATOM 14073	CE	LYS	D	123	66.371	61.121	98.457	1.00	68.82	C
ATOM 14076	NZ	LYS	D	123	67.102	62.300	99.097	1.00	74.24	N
ATOM 14080	C	LYS	D	123	64.761	57.241	95.373	1.00	54.21	C
ATOM 14081	O	LYS	D	123	63.536	57.235	95.342	1.00	52.84	O
ATOM 14082	N	GLY	D	124	65.417	56.518	96.234	1.00	57.38	N
ATOM 14084	CA	GLY	D	124	64.733	55.809	97.291	1.00	58.45	C
ATOM 14087	C	GLY	D	124	64.316	56.758	98.400	1.00	58.43	C
ATOM 14088	O	GLY	D	124	64.894	57.864	98.560	1.00	58.61	O
ATOM 14089	N	PRO	D	125	63.310	56.315	99.155	1.00	58.47	N
ATOM 14090	CA	PRO	D	125	62.713	57.103	100.230	1.00	58.38	C
ATOM 14092	CB	PRO	D	125	61.436	56.350	100.539	1.00	57.92	C
ATOM 14095	CG	PRO	D	125	61.782	54.878	100.208	1.00	59.26	C

ATOM	14098	CD	PRO	D	125	62.690	54.979	99.035	1.00	59.00	C
ATOM	14101	C	PRO	D	125	63.552	57.038	101.469	1.00	62.83	C
ATOM	14102	O	PRO	D	125	64.321	56.073	101.644	1.00	64.70	O
ATOM	14103	N	SER	D	126	63.389	58.069	102.297	1.00	63.66	N
ATOM	14105	CA	SER	D	126	63.821	58.051	103.670	1.00	68.27	C
ATOM	14107	CB	SER	D	126	64.670	59.277	104.016	1.00	71.00	C
ATOM	14110	OG	SER	D	126	63.979	60.445	103.680	1.00	70.40	O
ATOM	14112	C	SER	D	126	62.520	57.927	104.480	1.00	67.10	C
ATOM	14113	O	SER	D	126	61.438	58.220	103.960	1.00	63.05	O
ATOM	14114	N	VAL	D	127	62.644	57.394	105.709	1.00	70.81	N
ATOM	14116	CA	VAL	D	127	61.531	56.782	106.473	1.00	70.08	C
ATOM	14118	CB	VAL	D	127	61.577	55.231	106.423	1.00	71.07	C
ATOM	14120	CG1	VAL	D	127	60.469	54.669	107.223	1.00	72.19	C
ATOM	14124	CG2	VAL	D	127	61.482	54.719	105.003	1.00	66.98	C
ATOM	14128	C	VAL	D	127	61.614	57.164	107.935	1.00	73.31	C
ATOM	14129	O	VAL	D	127	62.406	56.660	108.598	1.00	76.86	O
ATOM	14130	N	PHE	D	128	60.795	58.080	108.402	1.00	72.76	N
ATOM	14132	CA	PHE	D	128	60.755	58.481	109.789	1.00	77.52	C
ATOM	14134	CB	PHE	D	128	60.660	60.012	109.858	1.00	77.44	C
ATOM	14137	CG	PHE	D	128	61.762	60.709	109.068	1.00	78.35	C
ATOM	14138	CD1	PHE	D	128	61.473	61.588	108.023	1.00	74.99	C
ATOM	14140	CE1	PHE	D	128	62.471	62.155	107.297	1.00	73.17	C
ATOM	14142	CZ	PHE	D	128	63.765	61.868	107.582	1.00	77.82	C
ATOM	14144	CE2	PHE	D	128	64.074	61.016	108.582	1.00	80.68	C
ATOM	14146	CD2	PHE	D	128	63.089	60.430	109.318	1.00	80.90	C
ATOM	14148	C	PHE	D	128	59.576	57.790	110.461	1.00	78.03	C
ATOM	14149	O	PHE	D	128	58.667	57.365	109.780	1.00	74.02	O
ATOM	14150	N	PRO	D	129	59.604	57.611	111.781	1.00	84.09	N
ATOM	14151	CA	PRO	D	129	58.457	57.042	112.494	1.00	85.22	C
ATOM	14153	CB	PRO	D	129	59.078	56.527	113.776	1.00	91.56	C
ATOM	14156	CG	PRO	D	129	60.132	57.546	114.071	1.00	94.86	C
ATOM	14159	CD	PRO	D	129	60.703	57.940	112.717	1.00	90.22	C
ATOM	14162	C	PRO	D	129	57.522	58.179	112.818	1.00	85.06	C
ATOM	14163	O	PRO	D	129	57.900	59.302	112.572	1.00	85.76	O
ATOM	14164	N	LEU	D	130	56.343	57.890	113.342	1.00	85.59	N
ATOM	14166	CA	LEU	D	130	55.394	58.881	113.824	1.00	85.82	C
ATOM	14168	CB	LEU	D	130	54.239	59.068	112.847	1.00	80.81	C
ATOM	14171	CG	LEU	D	130	54.384	59.615	111.434	1.00	76.34	C
ATOM	14173	CD1	LEU	D	130	53.028	59.517	110.732	1.00	73.31	C
ATOM	14177	CD2	LEU	D	130	54.855	61.068	111.414	1.00	77.79	C
ATOM	14181	C	LEU	D	130	54.860	58.224	115.070	1.00	90.47	C
ATOM	14182	O	LEU	D	130	53.815	57.574	115.037	1.00	89.75	O
ATOM	14183	N	ALA	D	131	55.601	58.344	116.162	1.00	96.32	N
ATOM	14185	CA	ALA	D	131	55.347	57.554	117.353	1.00	101.04	C
ATOM	14187	CB	ALA	D	131	56.545	57.608	118.237	1.00	107.25	C
ATOM	14191	C	ALA	D	131	54.118	58.036	118.109	1.00	102.96	C
ATOM	14192	O	ALA	D	131	53.813	59.224	118.068	1.00	101.97	O
ATOM	14193	N	PRO	D	132	53.447	57.125	118.830	1.00	106.22	N
ATOM	14194	CA	PRO	D	132	52.215	57.439	119.582	1.00	108.61	C
ATOM	14196	CB	PRO	D	132	51.637	56.027	119.870	1.00	109.88	C
ATOM	14199	CG	PRO	D	132	52.854	55.128	120.013	1.00	111.73	C
ATOM	14202	CD	PRO	D	132	53.831	55.703	119.007	1.00	108.34	C
ATOM	14205	C	PRO	D	132	52.484	58.180	120.916	1.00	115.60	C
ATOM	14206	O	PRO	D	132	51.947	57.773	121.972	1.00	120.74	O
ATOM	14207	N	SER	D	133	53.261	59.267	120.859	1.00	116.62	N
ATOM	14209	CA	SER	D	133	54.103	59.666	122.000	1.00	124.00	C
ATOM	14211	CB	SER	D	133	55.207	60.712	121.636	1.00	124.54	C
ATOM	14214	OG	SER	D	133	54.848	61.677	120.645	1.00	118.70	O
ATOM	14216	C	SER	D	133	53.234	60.103	123.172	1.00	129.46	C
ATOM	14217	O	SER	D	133	52.147	60.677	122.931	1.00	127.35	O
ATOM	14218	N	SER	D	134	53.726	59.793	124.396	1.00	136.79	N
ATOM	14220	CA	SER	D	134	52.982	59.796	125.685	1.00	143.02	C
ATOM	14222	CB	SER	D	134	53.599	60.774	126.704	1.00	150.95	C
ATOM	14225	OG	SER	D	134	53.463	62.111	126.259	1.00	149.72	O
ATOM	14227	C	SER	D	134	51.470	60.022	125.546	1.00	140.00	C
ATOM	14228	O	SER	D	134	50.863	60.833	126.267	1.00	144.16	O
ATOM	14229	N	LYS	D	135	50.881	59.254	124.626	1.00	133.42	N
ATOM	14231	CA	LYS	D	135	49.472	59.353	124.290	1.00	130.16	C

ATOM 14233	CB	LYS	D	135	49.180	58.611	122.963	1.00122.30	C
ATOM 14240	C	LYS	D	135	48.725	58.746	125.472	1.00135.96	C
ATOM 14241	O	LYS	D	135	48.452	57.551	125.475	1.00135.99	O
ATOM 14242	N	SER	D	136	48.443	59.541	126.506	1.00141.90	N
ATOM 14244	CA	SER	D	136	47.762	58.997	127.683	1.00148.08	C
ATOM 14246	CB	SER	D	136	48.003	59.872	128.938	1.00156.17	C
ATOM 14249	OG	SER	D	136	47.204	59.449	130.043	1.00160.68	O
ATOM 14251	C	SER	D	136	46.252	58.781	127.358	1.00145.76	C
ATOM 14252	O	SER	D	136	45.478	59.749	127.277	1.00145.97	O
ATOM 14253	N	THR	D	137	45.887	57.508	127.105	1.00143.97	N
ATOM 14255	CA	THR	D	137	44.495	57.012	126.990	1.00142.86	C
ATOM 14257	CB	THR	D	137	43.968	56.999	125.484	1.00134.89	C
ATOM 14259	OG1	THR	D	137	44.846	57.734	124.605	1.00129.83	O
ATOM 14261	CG2	THR	D	137	42.567	57.671	125.358	1.00134.26	C
ATOM 14265	C	THR	D	137	44.440	55.570	127.549	1.00146.23	C
ATOM 14266	O	THR	D	137	44.505	54.608	126.769	1.00142.87	O
ATOM 14267	N	SER	D	138	44.364	55.417	128.874	1.00153.23	N
ATOM 14269	CA	SER	D	138	44.243	54.088	129.508	1.00157.67	C
ATOM 14271	CB	SER	D	138	43.834	54.215	131.017	1.00166.65	C
ATOM 14274	OG	SER	D	138	42.567	53.646	131.354	1.00167.36	O
ATOM 14276	C	SER	D	138	43.278	53.162	128.739	1.00154.58	C
ATOM 14277	O	SER	D	138	43.711	52.177	128.126	1.00151.95	O
ATOM 14278	N	GLY	D	139	41.984	53.513	128.758	1.00155.39	N
ATOM 14280	CA	GLY	D	139	40.916	52.737	128.132	1.00153.62	C
ATOM 14283	C	GLY	D	139	40.310	53.374	126.872	1.00147.16	C
ATOM 14284	O	GLY	D	139	39.078	53.540	126.851	1.00148.77	O
ATOM 14285	N	GLY	D	140	41.159	53.757	125.887	1.00140.58	N
ATOM 14287	CA	GLY	D	140	40.785	54.070	124.501	1.00133.65	C
ATOM 14290	C	GLY	D	140	41.900	53.685	123.488	1.00128.29	C
ATOM 14291	O	GLY	D	140	43.034	53.341	123.877	1.00129.62	O
ATOM 14292	N	THR	D	141	41.622	53.770	122.181	1.00122.35	N
ATOM 14294	CA	THR	D	141	42.543	53.206	121.174	1.00117.27	C
ATOM 14296	CB	THR	D	141	41.749	52.518	120.026	1.00114.37	C
ATOM 14298	OG1	THR	D	141	41.283	51.237	120.468	1.00118.95	O
ATOM 14300	CG2	THR	D	141	42.640	52.107	118.885	1.00110.43	C
ATOM 14304	C	THR	D	141	43.460	54.289	120.658	1.00112.42	C
ATOM 14305	O	THR	D	141	43.007	55.385	120.437	1.00110.84	O
ATOM 14306	N	ALA	D	142	44.744	53.980	120.495	1.00110.72	N
ATOM 14308	CA	ALA	D	142	45.741	54.969	120.088	1.00107.63	C
ATOM 14310	CB	ALA	D	142	46.854	55.047	121.088	1.00111.82	C
ATOM 14314	C	ALA	D	142	46.308	54.630	118.726	1.00102.27	C
ATOM 14315	O	ALA	D	142	46.122	53.503	118.238	1.00101.65	O
ATOM 14316	N	ALA	D	143	47.020	55.610	118.149	1.00 98.80	N
ATOM 14318	CA	ALA	D	143	47.476	55.602	116.748	1.00 93.39	C
ATOM 14320	CB	ALA	D	143	46.600	56.585	115.878	1.00 89.96	C
ATOM 14324	C	ALA	D	143	48.970	55.943	116.551	1.00 92.18	C
ATOM 14325	O	ALA	D	143	49.568	56.769	117.278	1.00 93.80	O
ATOM 14326	N	LEU	D	144	49.547	55.316	115.529	1.00 88.87	N
ATOM 14328	CA	LEU	D	144	50.950	55.507	115.213	1.00 88.48	C
ATOM 14330	CB	LEU	D	144	51.793	54.604	116.101	1.00 93.10	C
ATOM 14333	CG	LEU	D	144	51.319	53.166	116.222	1.00 94.60	C
ATOM 14335	CD1	LEU	D	144	51.776	52.328	115.026	1.00 91.71	C
ATOM 14339	CD2	LEU	D	144	51.849	52.610	117.557	1.00101.82	C
ATOM 14343	C	LEU	D	144	51.243	55.237	113.737	1.00 84.16	C
ATOM 14344	O	LEU	D	144	50.331	54.826	112.998	1.00 81.75	O
ATOM 14345	N	GLY	D	145	52.504	55.438	113.316	1.00 83.52	N
ATOM 14347	CA	GLY	D	145	52.856	55.270	111.913	1.00 79.91	C
ATOM 14350	C	GLY	D	145	54.282	55.538	111.367	1.00 79.57	C
ATOM 14351	O	GLY	D	145	55.304	55.437	112.066	1.00 83.32	O
ATOM 14352	N	CYS	D	146	54.312	55.893	110.075	1.00 75.22	N
ATOM 14354	CA	CYS	D	146	55.508	55.855	109.206	1.00 73.84	C
ATOM 14356	CB	CYS	D	146	55.664	54.503	108.451	1.00 73.43	C
ATOM 14359	SG	CYS	D	146	56.308	53.216	109.520	1.00 81.52	S
ATOM 14360	C	CYS	D	146	55.384	56.912	108.144	1.00 69.05	C
ATOM 14361	O	CYS	D	146	54.402	56.950	107.391	1.00 65.38	O
ATOM 14362	N	LEU	D	147	56.406	57.747	108.065	1.00 68.91	N
ATOM 14364	CA	LEU	D	147	56.432	58.804	107.109	1.00 65.13	C
ATOM 14366	CB	LEU	D	147	56.963	60.025	107.764	1.00 67.65	C



ATOM 14369	CG	LEU	D	147	57.069	61.227	106.873	1.00	67.06	C
ATOM 14371	CD1	LEU	D	147	55.724	61.483	106.297	1.00	65.61	C
ATOM 14375	CD2	LEU	D	147	57.559	62.440	107.688	1.00	71.20	C
ATOM 14379	C	LEU	D	147	57.370	58.331	106.083	1.00	63.16	C
ATOM 14380	O	LEU	D	147	58.552	58.304	106.328	1.00	64.33	O
ATOM 14381	N	VAL	D	148	56.830	57.899	104.943	1.00	60.56	N
ATOM 14383	CA	VAL	D	148	57.671	57.588	103.762	1.00	59.44	C
ATOM 14385	CB	VAL	D	148	57.170	56.371	103.022	1.00	57.55	C
ATOM 14387	CG1	VAL	D	148	58.149	56.036	101.950	1.00	56.88	C
ATOM 14391	CG2	VAL	D	148	57.071	55.207	103.985	1.00	60.14	C
ATOM 14395	C	VAL	D	148	57.880	58.789	102.783	1.00	57.27	C
ATOM 14396	O	VAL	D	148	56.988	59.143	102.012	1.00	56.19	O
ATOM 14397	N	LYS	D	149	59.063	59.372	102.818	1.00	57.66	N
ATOM 14399	CA	LYS	D	149	59.293	60.687	102.272	1.00	56.80	C
ATOM 14401	CB	LYS	D	149	59.604	61.579	103.479	1.00	60.19	C
ATOM 14404	CG	LYS	D	149	60.038	63.016	103.218	1.00	62.14	C
ATOM 14407	CD	LYS	D	149	59.519	63.986	104.319	1.00	64.95	C
ATOM 14410	CE	LYS	D	149	59.517	65.451	103.856	1.00	66.61	C
ATOM 14413	NZ	LYS	D	149	60.933	65.996	103.508	1.00	69.35	N
ATOM 14417	C	LYS	D	149	60.435	60.715	101.246	1.00	56.13	C
ATOM 14418	O	LYS	D	149	61.365	59.926	101.268	1.00	58.22	O
ATOM 14419	N	ASP	D	150	60.363	61.652	100.340	1.00	54.55	N
ATOM 14421	CA	ASP	D	150	61.444	61.929	99.384	1.00	54.34	C
ATOM 14423	CB	ASP	D	150	62.629	62.585	100.090	1.00	58.17	C
ATOM 14426	CG	ASP	D	150	62.264	63.912	100.695	1.00	60.09	C
ATOM 14427	OD1	ASP	D	150	62.982	64.376	101.590	1.00	69.14	O
ATOM 14428	OD2	ASP	D	150	61.267	64.570	100.383	1.00	58.91	O
ATOM 14429	C	ASP	D	150	61.896	60.772	98.527	1.00	52.77	C
ATOM 14430	O	ASP	D	150	63.026	60.348	98.599	1.00	54.66	O
ATOM 14431	N	TYR	D	151	60.981	60.295	97.682	1.00	50.75	N
ATOM 14433	CA	TYR	D	151	61.252	59.228	96.706	1.00	49.16	C
ATOM 14435	CB	TYR	D	151	60.723	57.880	97.179	1.00	49.80	C
ATOM 14438	CG	TYR	D	151	59.222	57.790	97.252	1.00	48.09	C
ATOM 14439	CD1	TYR	D	151	58.483	57.376	96.154	1.00	46.12	C
ATOM 14441	CE1	TYR	D	151	57.135	57.321	96.171	1.00	45.49	C
ATOM 14443	CZ	TYR	D	151	56.438	57.658	97.307	1.00	45.19	C
ATOM 14444	OH	TYR	D	151	55.092	57.521	97.328	1.00	43.36	O
ATOM 14446	CE2	TYR	D	151	57.101	58.077	98.410	1.00	49.83	C
ATOM 14448	CD2	TYR	D	151	58.545	58.130	98.391	1.00	49.84	C
ATOM 14450	C	TYR	D	151	60.657	59.567	95.382	1.00	46.65	C
ATOM 14451	O	TYR	D	151	59.792	60.426	95.271	1.00	44.77	O
ATOM 14452	N	PHE	D	152	61.155	58.867	94.379	1.00	46.98	N
ATOM 14454	CA	PHE	D	152	60.724	59.046	93.020	1.00	46.06	C
ATOM 14456	CB	PHE	D	152	61.221	60.378	92.532	1.00	46.70	C
ATOM 14459	CG	PHE	D	152	60.649	60.766	91.240	1.00	46.30	C
ATOM 14460	CD1	PHE	D	152	61.258	60.423	90.090	1.00	47.89	C
ATOM 14462	CE1	PHE	D	152	60.726	60.772	88.909	1.00	47.13	C
ATOM 14464	CZ	PHE	D	152	59.636	61.473	88.857	1.00	43.58	C
ATOM 14466	CE2	PHE	D	152	59.024	61.811	89.990	1.00	45.67	C
ATOM 14468	CD2	PHE	D	152	59.510	61.472	91.174	1.00	44.91	C
ATOM 14470	C	PHE	D	152	61.265	57.933	92.107	1.00	47.13	C
ATOM 14471	O	PHE	D	152	62.368	57.460	92.281	1.00	46.91	O
ATOM 14472	N	PRO	D	153	60.458	57.446	91.172	1.00	47.74	N
ATOM 14473	CA	PRO	D	153	59.064	57.821	91.009	1.00	46.84	C
ATOM 14475	CB	PRO	D	153	58.855	57.629	89.519	1.00	47.99	C
ATOM 14478	CG	PRO	D	153	59.782	56.422	89.160	1.00	49.21	C
ATOM 14481	CD	PRO	D	153	60.823	56.380	90.221	1.00	49.16	C
ATOM 14484	C	PRO	D	153	58.259	56.813	91.759	1.00	46.89	C
ATOM 14485	O	PRO	D	153	58.853	56.011	92.434	1.00	46.53	O
ATOM 14486	N	GLU	D	154	56.945	56.877	91.635	1.00	47.75	N
ATOM 14488	CA	GLU	D	154	56.045	55.904	92.262	1.00	49.53	C
ATOM 14490	CB	GLU	D	154	54.615	56.391	92.071	1.00	49.61	C
ATOM 14493	CG	GLU	D	154	54.229	57.558	92.949	1.00	48.55	C
ATOM 14496	CD	GLU	D	154	53.234	57.082	94.005	1.00	51.59	C
ATOM 14497	OE1	GLU	D	154	53.672	56.795	95.160	1.00	50.24	O
ATOM 14498	OE2	GLU	D	154	52.016	56.961	93.650	1.00	52.02	O
ATOM 14499	C	GLU	D	154	56.182	54.533	91.593	1.00	51.99	C
ATOM 14500	O	GLU	D	154	56.757	54.438	90.491	1.00	52.94	O

ATOM	14501	N	PRO	D	155	55.706	53.469	92.229	1.00	54.47	N
ATOM	14502	CA	PRO	D	155	55.067	53.470	93.560	1.00	55.09	C
ATOM	14504	CB	PRO	D	155	53.979	52.480	93.367	1.00	56.62	C
ATOM	14507	CG	PRO	D	155	54.662	51.449	92.460	1.00	58.94	C
ATOM	14510	CD	PRO	D	155	55.738	52.112	91.677	1.00	57.37	C
ATOM	14513	C	PRO	D	155	55.902	52.909	94.714	1.00	56.44	C
ATOM	14514	O	PRO	D	155	56.987	52.293	94.496	1.00	57.94	O
ATOM	14515	N	VAL	D	156	55.356	53.104	95.921	1.00	55.95	N
ATOM	14517	CA	VAL	D	156	55.900	52.510	97.110	1.00	58.09	C
ATOM	14519	CB	VAL	D	156	56.074	53.534	98.199	1.00	57.30	C
ATOM	14521	CG1	VAL	D	156	56.640	52.887	99.512	1.00	60.92	C
ATOM	14525	CG2	VAL	D	156	57.072	54.513	97.769	1.00	57.85	C
ATOM	14529	C	VAL	D	156	54.907	51.505	97.595	1.00	60.29	C
ATOM	14530	O	VAL	D	156	53.748	51.612	97.316	1.00	61.45	O
ATOM	14531	N	THR	D	157	55.373	50.518	98.313	1.00	62.28	N
ATOM	14533	CA	THR	D	157	54.531	49.596	98.993	1.00	64.84	C
ATOM	14535	CB	THR	D	157	55.070	48.221	98.666	1.00	68.70	C
ATOM	14537	OG1	THR	D	157	54.767	47.907	97.300	1.00	68.61	O
ATOM	14539	CG2	THR	D	157	54.377	47.166	99.467	1.00	74.43	C
ATOM	14543	C	THR	D	157	54.791	49.880	100.432	1.00	65.43	C
ATOM	14544	O	THR	D	157	55.929	50.121	100.772	1.00	67.18	O
ATOM	14545	N	VAL	D	158	53.792	49.826	101.297	1.00	66.13	N
ATOM	14547	CA	VAL	D	158	54.027	49.793	102.753	1.00	67.84	C
ATOM	14549	CB	VAL	D	158	53.496	51.066	103.435	1.00	65.69	C
ATOM	14551	CG1	VAL	D	158	53.812	51.053	104.905	1.00	67.82	C
ATOM	14555	CG2	VAL	D	158	54.053	52.331	102.774	1.00	61.61	C
ATOM	14559	C	VAL	D	158	53.277	48.599	103.351	1.00	72.19	C
ATOM	14560	O	VAL	D	158	52.314	48.156	102.776	1.00	73.95	O
ATOM	14561	N	SER	D	159	53.681	48.090	104.507	1.00	75.68	N
ATOM	14563	CA	SER	D	159	52.984	46.954	105.155	1.00	80.05	C
ATOM	14565	CB	SER	D	159	53.231	45.659	104.387	1.00	83.26	C
ATOM	14568	OG	SER	D	159	54.603	45.300	104.525	1.00	84.89	O
ATOM	14570	C	SER	D	159	53.544	46.773	106.546	1.00	83.51	C
ATOM	14571	O	SER	D	159	54.718	47.089	106.775	1.00	83.52	O
ATOM	14572	N	TRP	D	160	52.768	46.211	107.471	1.00	87.04	N
ATOM	14574	CA	TRP	D	160	53.284	46.101	108.846	1.00	90.70	C
ATOM	14576	CB	TRP	D	160	52.378	46.873	109.763	1.00	89.83	C
ATOM	14579	CG	TRP	D	160	52.246	48.303	109.409	1.00	84.69	C
ATOM	14580	CD1	TRP	D	160	51.543	48.842	108.352	1.00	79.29	C
ATOM	14582	NE1	TRP	D	160	51.623	50.213	108.391	1.00	73.78	N
ATOM	14584	CE2	TRP	D	160	52.373	50.592	109.470	1.00	76.63	C
ATOM	14585	CD2	TRP	D	160	52.788	49.408	110.131	1.00	83.36	C
ATOM	14586	CE3	TRP	D	160	53.560	49.524	111.289	1.00	87.07	C
ATOM	14588	CZ3	TRP	D	160	53.910	50.795	111.732	1.00	86.68	C
ATOM	14590	CH2	TRP	D	160	53.494	51.947	111.041	1.00	80.65	C
ATOM	14592	CZ2	TRP	D	160	52.723	51.864	109.916	1.00	75.76	C
ATOM	14594	C	TRP	D	160	53.529	44.669	109.400	1.00	97.32	C
ATOM	14595	O	TRP	D	160	52.681	43.805	109.261	1.00	100.42	O
ATOM	14596	N	ASN	D	161	54.708	44.447	110.002	1.00	100.50	N
ATOM	14598	CA	ASN	D	161	55.107	43.189	110.664	1.00	107.59	C
ATOM	14600	CB	ASN	D	161	54.168	42.853	111.837	1.00	111.38	C
ATOM	14603	CG	ASN	D	161	54.071	43.990	112.867	1.00	109.86	C
ATOM	14604	OD1	ASN	D	161	53.451	43.837	113.914	1.00	113.63	O
ATOM	14605	ND2	ASN	D	161	54.700	45.122	112.572	1.00	104.12	N
ATOM	14608	C	ASN	D	161	55.201	42.031	109.686	1.00	109.80	C
ATOM	14609	O	ASN	D	161	54.581	40.995	109.890	1.00	113.89	O
ATOM	14610	N	SER	D	162	56.001	42.232	108.633	1.00	107.26	N
ATOM	14612	CA	SER	D	162	55.962	41.418	107.389	1.00	108.05	C
ATOM	14614	CB	SER	D	162	56.905	40.169	107.464	1.00	115.28	C
ATOM	14617	OG	SER	D	162	56.533	39.196	108.446	1.00	122.27	O
ATOM	14619	C	SER	D	162	54.515	41.104	106.843	1.00	106.92	C
ATOM	14620	O	SER	D	162	54.284	40.170	106.071	1.00	109.12	O
ATOM	14621	N	GLY	D	163	53.558	41.941	107.206	1.00	103.43	N
ATOM	14623	CA	GLY	D	163	52.218	41.849	106.659	1.00	102.77	C
ATOM	14626	C	GLY	D	163	51.214	41.161	107.561	1.00	107.96	C
ATOM	14627	O	GLY	D	163	50.140	40.801	107.100	1.00	109.21	O
ATOM	14628	N	ALA	D	164	51.541	40.998	108.842	1.00	111.31	N
ATOM	14630	CA	ALA	D	164	50.641	40.355	109.775	1.00	116.24	C

ATOM 14632	CB	ALA	D	164	51.422	39.829	110.979	1.00121.90	C
ATOM 14636	C	ALA	D	164	49.498	41.278	110.236	1.00113.12	C
ATOM 14637	O	ALA	D	164	48.523	40.774	110.836	1.00117.66	O
ATOM 14638	N	LEU	D	165	49.610	42.594	109.985	1.00106.18	N
ATOM 14640	CA	LEU	D	165	48.572	43.596	110.366	1.00103.35	C
ATOM 14642	CB	LEU	D	165	49.213	44.841	111.017	1.00100.01	C
ATOM 14645	CG	LEU	D	165	49.884	44.675	112.393	1.00104.07	C
ATOM 14647	CD1	LEU	D	165	49.895	46.010	113.140	1.00100.25	C
ATOM 14651	CD2	LEU	D	165	49.215	43.516	113.304	1.00113.44	C
ATOM 14655	C	LEU	D	165	47.666	44.060	109.206	1.00 99.38	C
ATOM 14656	O	LEU	D	165	48.126	44.281	108.107	1.00 95.88	O
ATOM 14657	N	THR	D	166	46.382	44.244	109.481	1.00100.31	N
ATOM 14659	CA	THR	D	166	45.386	44.436	108.428	1.00 98.64	C
ATOM 14661	CB	THR	D	166	44.681	43.068	108.100	1.00104.71	C
ATOM 14663	OG1	THR	D	166	45.324	42.495	106.961	1.00104.16	O
ATOM 14665	CG2	THR	D	166	43.167	43.212	107.657	1.00105.79	C
ATOM 14669	C	THR	D	166	44.388	45.506	108.810	1.00 96.21	C
ATOM 14670	O	THR	D	166	44.421	46.562	108.235	1.00 91.40	O
ATOM 14671	N	SER	D	167	43.492	45.242	109.755	1.00100.00	N
ATOM 14673	CA	SER	D	167	42.552	46.277	110.121	1.00 98.66	C
ATOM 14675	CB	SER	D	167	41.333	45.736	110.879	1.00103.89	C
ATOM 14678	OG	SER	D	167	41.735	45.120	112.053	1.00106.75	O
ATOM 14680	C	SER	D	167	43.307	47.389	110.895	1.00 95.73	C
ATOM 14681	O	SER	D	167	44.117	47.131	111.821	1.00 96.71	O
ATOM 14682	N	GLY	D	168	43.027	48.623	110.464	1.00 91.77	N
ATOM 14684	CA	GLY	D	168	43.655	49.807	110.982	1.00 89.03	C
ATOM 14687	C	GLY	D	168	44.604	50.335	109.936	1.00 84.96	C
ATOM 14688	O	GLY	D	168	45.059	51.438	110.086	1.00 83.18	O
ATOM 14689	N	VAL	D	169	44.892	49.580	108.871	1.00 84.50	N
ATOM 14691	CA	VAL	D	169	45.986	49.932	107.935	1.00 80.36	C
ATOM 14693	CB	VAL	D	169	46.696	48.697	107.290	1.00 82.08	C
ATOM 14695	CG1	VAL	D	169	47.829	49.109	106.355	1.00 76.99	C
ATOM 14699	CG2	VAL	D	169	47.248	47.793	108.385	1.00 87.51	C
ATOM 14703	C	VAL	D	169	45.440	50.853	106.859	1.00 76.27	C
ATOM 14704	O	VAL	D	169	44.763	50.448	105.886	1.00 75.78	O
ATOM 14705	N	HIS	D	170	45.770	52.104	107.099	1.00 72.66	N
ATOM 14707	CA	HIS	D	170	45.447	53.183	106.249	1.00 69.38	C
ATOM 14709	CB	HIS	D	170	44.786	54.234	107.116	1.00 70.06	C
ATOM 14712	CG	HIS	D	170	43.316	54.039	107.318	1.00 71.85	C
ATOM 14713	ND1	HIS	D	170	42.431	53.891	106.277	1.00 70.83	N
ATOM 14715	CE1	HIS	D	170	41.200	53.816	106.759	1.00 75.91	C
ATOM 14717	NE2	HIS	D	170	41.258	53.904	108.075	1.00 76.31	N
ATOM 14719	CD2	HIS	D	170	42.571	54.040	108.449	1.00 74.79	C
ATOM 14721	C	HIS	D	170	46.730	53.740	105.599	1.00 65.87	C
ATOM 14722	O	HIS	D	170	47.590	54.326	106.240	1.00 64.33	O
ATOM 14723	N	THR	D	171	46.813	53.616	104.287	1.00 64.92	N
ATOM 14725	CA	THR	D	171	48.045	53.890	103.569	1.00 61.85	C
ATOM 14727	CB	THR	D	171	48.525	52.618	102.809	1.00 63.26	C
ATOM 14729	OG1	THR	D	171	48.681	51.525	103.768	1.00 68.52	O
ATOM 14731	CG2	THR	D	171	49.922	52.775	102.220	1.00 60.74	C
ATOM 14735	C	THR	D	171	48.066	55.083	102.701	1.00 57.66	C
ATOM 14736	O	THR	D	171	49.097	55.421	102.275	1.00 59.99	O
ATOM 14737	N	PHE	D	172	47.052	55.841	102.493	1.00 56.24	N
ATOM 14739	CA	PHE	D	172	47.309	57.278	102.015	1.00 53.44	C
ATOM 14741	CB	PHE	D	172	47.980	58.182	103.068	1.00 52.85	C
ATOM 14744	CG	PHE	D	172	47.131	58.461	104.272	1.00 56.06	C
ATOM 14745	CD1	PHE	D	172	47.421	57.886	105.494	1.00 57.70	C
ATOM 14747	CE1	PHE	D	172	46.598	58.125	106.593	1.00 61.30	C
ATOM 14749	CZ	PHE	D	172	45.466	58.949	106.488	1.00 61.98	C
ATOM 14751	CE2	PHE	D	172	45.158	59.512	105.286	1.00 61.46	C
ATOM 14753	CD2	PHE	D	172	46.002	59.285	104.175	1.00 58.64	C
ATOM 14755	C	PHE	D	172	48.040	57.484	100.684	1.00 50.18	C
ATOM 14756	O	PHE	D	172	49.188	57.152	100.499	1.00 48.95	O
ATOM 14757	N	PRO	D	173	47.323	57.960	99.703	1.00 51.03	N
ATOM 14758	CA	PRO	D	173	47.966	58.259	98.437	1.00 50.61	C
ATOM 14760	CB	PRO	D	173	46.828	58.841	97.589	1.00 51.50	C
ATOM 14763	CG	PRO	D	173	45.802	59.112	98.483	1.00 53.99	C
ATOM 14766	CD	PRO	D	173	45.876	58.146	99.622	1.00 52.80	C

ATOM	14769	C	PRO	D	173	49.105	59.258	98.568	1.00	49.69	C
ATOM	14770	O	PRO	D	173	49.007	60.262	99.263	1.00	50.24	O
ATOM	14771	N	ALA	D	174	50.192	58.982	97.865	1.00	49.12	N
ATOM	14773	CA	ALA	D	174	51.333	59.885	97.868	1.00	48.07	C
ATOM	14775	CB	ALA	D	174	52.374	59.344	96.969	1.00	47.30	C
ATOM	14779	C	ALA	D	174	50.988	61.267	97.411	1.00	48.33	C
ATOM	14780	O	ALA	D	174	49.996	61.501	96.760	1.00	48.62	O
ATOM	14781	N	VAL	D	175	51.863	62.181	97.732	1.00	48.93	N
ATOM	14783	CA	VAL	D	175	51.693	63.544	97.311	1.00	50.08	C
ATOM	14785	CB	VAL	D	175	51.278	64.396	98.464	1.00	52.47	C
ATOM	14787	CG1	VAL	D	175	51.091	65.789	98.004	1.00	56.48	C
ATOM	14791	CG2	VAL	D	175	49.992	63.925	99.000	1.00	53.12	C
ATOM	14795	C	VAL	D	175	53.009	64.056	96.790	1.00	49.12	C
ATOM	14796	O	VAL	D	175	54.031	63.730	97.308	1.00	48.44	O
ATOM	14797	N	LEU	D	176	52.965	64.862	95.747	1.00	49.70	N
ATOM	14799	CA	LEU	D	176	54.162	65.349	95.125	1.00	49.52	C
ATOM	14801	CB	LEU	D	176	53.854	65.602	93.685	1.00	50.20	C
ATOM	14804	CG	LEU	D	176	54.982	66.015	92.758	1.00	51.28	C
ATOM	14806	CD1	LEU	D	176	56.160	65.079	92.906	1.00	51.18	C
ATOM	14810	CD2	LEU	D	176	54.408	65.949	91.360	1.00	51.54	C
ATOM	14814	C	LEU	D	176	54.528	66.631	95.771	1.00	51.36	C
ATOM	14815	O	LEU	D	176	53.750	67.559	95.800	1.00	53.28	O
ATOM	14816	N	GLN	D	177	55.703	66.664	96.348	1.00	52.30	N
ATOM	14818	CA	GLN	D	177	56.173	67.852	97.072	1.00	55.83	C
ATOM	14820	CB	GLN	D	177	57.242	67.468	98.109	1.00	56.07	C
ATOM	14823	CG	GLN	D	177	56.885	66.367	99.070	1.00	53.77	C
ATOM	14826	CD	GLN	D	177	58.093	65.861	99.821	1.00	55.31	C
ATOM	14827	OE1	GLN	D	177	59.134	66.373	99.640	1.00	67.15	O
ATOM	14828	NE2	GLN	D	177	57.940	64.937	100.701	1.00	56.54	N
ATOM	14831	C	GLN	D	177	56.753	68.909	96.092	1.00	57.83	C
ATOM	14832	O	GLN	D	177	56.895	68.652	94.905	1.00	57.07	O
ATOM	14833	N	SER	D	178	57.105	70.086	96.594	1.00	61.86	N
ATOM	14835	CA	SER	D	178	57.698	71.128	95.747	1.00	64.24	C
ATOM	14837	CB	SER	D	178	57.821	72.425	96.515	1.00	68.85	C
ATOM	14840	OG	SER	D	178	56.592	73.127	96.433	1.00	70.78	O
ATOM	14842	C	SER	D	178	59.054	70.760	95.178	1.00	63.76	C
ATOM	14843	O	SER	D	178	59.474	71.301	94.193	1.00	64.54	O
ATOM	14844	N	SER	D	179	59.735	69.827	95.820	1.00	63.67	N
ATOM	14846	CA	SER	D	179	61.005	69.276	95.324	1.00	63.08	C
ATOM	14848	CB	SER	D	179	61.691	68.545	96.476	1.00	63.84	C
ATOM	14851	OG	SER	D	179	60.849	67.484	97.003	1.00	62.76	O
ATOM	14853	C	SER	D	179	60.897	68.260	94.149	1.00	60.11	C
ATOM	14854	O	SER	D	179	61.972	67.795	93.639	1.00	60.04	O
ATOM	14855	N	GLY	D	180	59.651	67.856	93.788	1.00	56.93	N
ATOM	14857	CA	GLY	D	180	59.442	66.838	92.771	1.00	53.61	C
ATOM	14860	C	GLY	D	180	59.604	65.423	93.306	1.00	51.38	C
ATOM	14861	O	GLY	D	180	59.592	64.412	92.557	1.00	49.29	O
ATOM	14862	N	LEU	D	181	59.728	65.348	94.623	1.00	51.34	N
ATOM	14864	CA	LEU	D	181	59.769	64.068	95.288	1.00	50.39	C
ATOM	14866	CB	LEU	D	181	60.814	64.149	96.347	1.00	52.46	C
ATOM	14869	CG	LEU	D	181	62.218	64.303	95.845	1.00	53.18	C
ATOM	14871	CD1	LEU	D	181	63.179	64.532	97.017	1.00	53.74	C
ATOM	14875	CD2	LEU	D	181	62.516	63.006	95.073	1.00	51.26	C
ATOM	14879	C	LEU	D	181	58.437	63.756	95.964	1.00	49.42	C
ATOM	14880	O	LEU	D	181	57.823	64.632	96.590	1.00	50.84	O
ATOM	14881	N	TYR	D	182	57.995	62.517	95.866	1.00	47.37	N
ATOM	14883	CA	TYR	D	182	56.805	62.099	96.625	1.00	47.21	C
ATOM	14885	CB	TYR	D	182	56.283	60.780	96.092	1.00	46.17	C
ATOM	14888	CG	TYR	D	182	55.767	60.930	94.708	1.00	45.87	C
ATOM	14889	CD1	TYR	D	182	56.557	60.615	93.633	1.00	46.82	C
ATOM	14891	CE1	TYR	D	182	56.098	60.809	92.348	1.00	48.35	C
ATOM	14893	CZ	TYR	D	182	54.813	61.268	92.138	1.00	47.09	C
ATOM	14894	OH	TYR	D	182	54.417	61.435	90.868	1.00	45.62	O
ATOM	14896	CE2	TYR	D	182	54.012	61.607	93.185	1.00	45.99	C
ATOM	14898	CD2	TYR	D	182	54.494	61.461	94.465	1.00	46.47	C
ATOM	14900	C	TYR	D	182	57.045	61.914	98.120	1.00	48.05	C
ATOM	14901	O	TYR	D	182	58.117	61.576	98.545	1.00	48.45	O
ATOM	14902	N	SER	D	183	56.034	62.171	98.915	1.00	48.87	N

ATOM 14904	CA	SER	D	183	55.925	61.467	100.149	1.00	51.41	C
ATOM 14906	CB	SER	D	183	56.474	62.252	101.324	1.00	53.74	C
ATOM 14909	OG	SER	D	183	55.445	62.952	101.902	1.00	57.05	O
ATOM 14911	C	SER	D	183	54.518	60.978	100.430	1.00	51.30	C
ATOM 14912	O	SER	D	183	53.558	61.281	99.726	1.00	50.46	O
ATOM 14913	N	LEU	D	184	54.452	60.236	101.521	1.00	53.32	N
ATOM 14915	CA	LEU	D	184	53.409	59.260	101.805	1.00	54.25	C
ATOM 14917	CB	LEU	D	184	53.948	57.905	101.387	1.00	54.63	C
ATOM 14920	CG	LEU	D	184	53.018	56.728	101.250	1.00	54.80	C
ATOM 14922	CD1	LEU	D	184	52.219	56.950	100.076	1.00	53.73	C
ATOM 14926	CD2	LEU	D	184	53.879	55.526	101.028	1.00	57.84	C
ATOM 14930	C	LEU	D	184	53.275	59.190	103.308	1.00	56.22	C
ATOM 14931	O	LEU	D	184	54.094	59.680	104.021	1.00	57.29	O
ATOM 14932	N	SER	D	185	52.272	58.516	103.800	1.00	57.35	N
ATOM 14934	CA	SER	D	185	52.379	58.007	105.174	1.00	59.70	C
ATOM 14936	CB	SER	D	185	52.049	59.067	106.224	1.00	61.87	C
ATOM 14939	OG	SER	D	185	50.921	59.813	105.836	1.00	63.92	O
ATOM 14941	C	SER	D	185	51.474	56.865	105.319	1.00	58.54	C
ATOM 14942	O	SER	D	185	50.405	56.906	104.803	1.00	55.56	O
ATOM 14943	N	SER	D	186	51.955	55.837	105.977	1.00	60.18	N
ATOM 14945	CA	SER	D	186	51.078	54.790	106.428	1.00	63.53	C
ATOM 14947	CB	SER	D	186	51.565	53.439	105.983	1.00	64.38	C
ATOM 14950	OG	SER	D	186	51.306	52.536	107.024	1.00	69.79	O
ATOM 14952	C	SER	D	186	50.824	54.828	107.946	1.00	66.75	C
ATOM 14953	O	SER	D	186	51.600	55.365	108.716	1.00	68.12	O
ATOM 14954	N	VAL	D	187	49.700	54.263	108.364	1.00	69.09	N
ATOM 14956	CA	VAL	D	187	49.165	54.560	109.697	1.00	72.02	C
ATOM 14958	CB	VAL	D	187	48.374	55.912	109.640	1.00	70.96	C
ATOM 14960	CG1	VAL	D	187	47.059	55.856	110.271	1.00	72.97	C
ATOM 14964	CG2	VAL	D	187	49.184	57.018	110.284	1.00	72.15	C
ATOM 14968	C	VAL	D	187	48.375	53.380	110.180	1.00	74.57	C
ATOM 14969	O	VAL	D	187	47.765	52.687	109.388	1.00	73.67	O
ATOM 14970	N	VAL	D	188	48.480	53.089	111.467	1.00	78.78	N
ATOM 14972	CA	VAL	D	188	47.669	52.026	112.060	1.00	83.05	C
ATOM 14974	CB	VAL	D	188	48.424	50.763	112.506	1.00	86.25	C
ATOM 14976	CG1	VAL	D	188	47.620	49.558	112.107	1.00	88.84	C
ATOM 14980	CG2	VAL	D	188	49.766	50.672	111.881	1.00	86.59	C
ATOM 14984	C	VAL	D	188	46.954	52.550	113.272	1.00	86.01	C
ATOM 14985	O	VAL	D	188	47.492	53.373	114.027	1.00	87.50	O
ATOM 14986	N	THR	D	189	45.717	52.090	113.409	1.00	87.42	N
ATOM 14988	CA	THR	D	189	45.015	52.183	114.633	1.00	90.97	C
ATOM 14990	CB	THR	D	189	43.536	52.320	114.347	1.00	91.22	C
ATOM 14992	OG1	THR	D	189	43.307	53.207	113.261	1.00	85.40	O
ATOM 14994	CG2	THR	D	189	42.842	52.982	115.480	1.00	95.29	C
ATOM 14998	C	THR	D	189	45.331	50.835	115.304	1.00	95.78	C
ATOM 14999	O	THR	D	189	45.260	49.755	114.672	1.00	96.14	O
ATOM 15000	N	VAL	D	190	45.746	50.884	116.561	1.00	99.65	N
ATOM 15002	CA	VAL	D	190	45.807	49.661	117.344	1.00	105.40	C
ATOM 15004	CB	VAL	D	190	47.212	48.949	117.308	1.00	106.50	C
ATOM 15006	CG1	VAL	D	190	47.112	47.459	117.879	1.00	113.44	C
ATOM 15010	CG2	VAL	D	190	47.766	48.880	115.927	1.00	101.20	C
ATOM 15014	C	VAL	D	190	45.413	49.955	118.791	1.00	110.32	C
ATOM 15015	O	VAL	D	190	45.707	51.074	119.275	1.00	109.76	O
ATOM 15016	N	PRO	D	191	44.744	48.985	119.460	1.00	114.97	N
ATOM 15017	CA	PRO	D	191	44.542	49.062	120.915	1.00	120.91	C
ATOM 15019	CB	PRO	D	191	44.043	47.643	121.300	1.00	125.96	C
ATOM 15022	CG	PRO	D	191	44.151	46.807	120.045	1.00	123.19	C
ATOM 15025	CD	PRO	D	191	44.102	47.772	118.900	1.00	115.97	C
ATOM 15028	C	PRO	D	191	45.853	49.394	121.632	1.00	122.98	C
ATOM 15029	O	PRO	D	191	46.839	48.659	121.471	1.00	123.92	O
ATOM 15030	N	SER	D	192	45.865	50.488	122.396	1.00	124.39	N
ATOM 15032	CA	SER	D	192	47.084	50.948	123.089	1.00	126.95	C
ATOM 15034	CB	SER	D	192	46.777	52.111	124.075	1.00	129.91	C
ATOM 15037	OG	SER	D	192	45.532	51.972	124.740	1.00	133.29	O
ATOM 15039	C	SER	D	192	47.947	49.817	123.741	1.00	132.43	C
ATOM 15040	O	SER	D	192	49.151	49.762	123.488	1.00	131.87	O
ATOM 15041	N	SER	D	193	47.354	48.897	124.509	1.00	137.70	N
ATOM 15043	CA	SER	D	193	48.126	47.756	125.053	1.00	143.45	C

ATOM	15045	CB	SER	D	193	47.327	46.438	125.055	1.00146.12	C
ATOM	15048	OG	SER	D	193	46.031	46.630	125.549	1.00145.50	O
ATOM	15050	C	SER	D	193	49.469	47.537	124.314	1.00141.77	C
ATOM	15051	O	SER	D	193	50.505	48.003	124.802	1.00144.72	O
ATOM	15052	N	SER	D	194	49.431	46.911	123.120	1.00137.58	N
ATOM	15054	CA	SER	D	194	50.576	46.172	122.505	1.00137.39	C
ATOM	15056	CB	SER	D	194	51.823	47.067	122.336	1.00134.79	C
ATOM	15059	OG	SER	D	194	51.599	48.394	122.757	1.00130.77	O
ATOM	15061	C	SER	D	194	50.904	44.805	123.248	1.00146.68	C
ATOM	15062	O	SER	D	194	52.066	44.543	123.660	1.00150.94	O
ATOM	15063	N	LEU	D	195	49.851	43.974	123.443	1.00150.16	N
ATOM	15065	CA	LEU	D	195	49.925	42.548	123.927	1.00158.06	C
ATOM	15067	CB	LEU	D	195	48.727	42.204	124.827	1.00162.41	C
ATOM	15073	C	LEU	D	195	49.952	41.592	122.701	1.00156.29	C
ATOM	15074	O	LEU	D	195	49.549	42.026	121.607	1.00149.95	O
ATOM	15075	N	GLY	D	196	50.425	40.340	122.842	1.00162.68	N
ATOM	15077	CA	GLY	D	196	50.727	39.497	121.675	1.00161.42	C
ATOM	15080	C	GLY	D	196	51.318	40.257	120.455	1.00153.51	C
ATOM	15081	O	GLY	D	196	50.581	40.655	119.512	1.00147.54	O
ATOM	15082	N	THR	D	197	52.642	40.478	120.464	1.00153.86	N
ATOM	15084	CA	THR	D	197	53.368	41.350	119.480	1.00146.39	C
ATOM	15086	CB	THR	D	197	53.254	40.820	117.993	1.00142.49	C
ATOM	15088	OG1	THR	D	197	54.045	39.617	117.882	1.00149.06	O
ATOM	15090	CG2	THR	D	197	53.887	41.806	116.926	1.00133.52	C
ATOM	15094	C	THR	D	197	53.138	42.899	119.643	1.00140.17	C
ATOM	15095	O	THR	D	197	52.525	43.607	118.818	1.00132.05	O
ATOM	15096	N	GLN	D	198	53.709	43.363	120.759	1.00144.11	N
ATOM	15098	CA	GLN	D	198	53.825	44.764	121.116	1.00140.43	C
ATOM	15100	CB	GLN	D	198	54.450	44.898	122.532	1.00147.96	C
ATOM	15107	C	GLN	D	198	54.697	45.496	120.114	1.00134.16	C
ATOM	15108	O	GLN	D	198	54.789	46.710	120.188	1.00130.78	O
ATOM	15109	N	THR	D	199	55.332	44.766	119.190	1.00133.07	N
ATOM	15111	CA	THR	D	199	56.296	45.351	118.244	1.00128.45	C
ATOM	15113	CB	THR	D	199	57.444	44.346	117.891	1.00132.44	C
ATOM	15115	OG1	THR	D	199	57.295	43.134	118.631	1.00139.60	O
ATOM	15117	CG2	THR	D	199	58.814	44.873	118.344	1.00135.37	C
ATOM	15121	C	THR	D	199	55.626	45.857	116.943	1.00120.09	C
ATOM	15122	O	THR	D	199	55.024	45.084	116.183	1.00118.92	O
ATOM	15123	N	TYR	D	200	55.751	47.155	116.680	1.00115.03	N
ATOM	15125	CA	TYR	D	200	55.213	47.730	115.454	1.00107.62	C
ATOM	15127	CB	TYR	D	200	54.281	48.908	115.795	1.00104.46	C
ATOM	15130	CG	TYR	D	200	53.147	48.489	116.711	1.00106.68	C
ATOM	15131	CD1	TYR	D	200	52.975	49.070	117.970	1.00109.12	C
ATOM	15133	CE1	TYR	D	200	51.963	48.664	118.811	1.00111.35	C
ATOM	15135	CZ	TYR	D	200	51.115	47.661	118.401	1.00111.91	C
ATOM	15136	OH	TYR	D	200	50.096	47.221	119.207	1.00115.71	O
ATOM	15138	CE2	TYR	D	200	51.271	47.068	117.166	1.00109.67	C
ATOM	15140	CD2	TYR	D	200	52.277	47.479	116.333	1.00106.06	C
ATOM	15142	C	TYR	D	200	56.346	48.132	114.499	1.00104.92	C
ATOM	15143	O	TYR	D	200	57.050	49.105	114.738	1.00104.47	O
ATOM	15144	N	ILE	D	201	56.521	47.366	113.424	1.00103.81	N
ATOM	15146	CA	ILE	D	201	57.545	47.671	112.429	1.00102.21	C
ATOM	15148	CB	ILE	D	201	58.684	46.590	112.496	1.00107.75	C
ATOM	15150	CG1	ILE	D	201	59.393	46.656	113.856	1.00113.72	C
ATOM	15153	CD1	ILE	D	201	60.523	45.656	114.048	1.00119.86	C
ATOM	15157	CG2	ILE	D	201	59.717	46.792	111.336	1.00105.63	C
ATOM	15161	C	ILE	D	201	56.997	47.807	110.980	1.00 96.83	C
ATOM	15162	O	ILE	D	201	56.436	46.849	110.436	1.00 97.98	O
ATOM	15163	N	CYS	D	202	57.184	48.959	110.330	1.00 92.25	N
ATOM	15165	CA	CYS	D	202	56.695	49.076	108.944	1.00 87.63	C
ATOM	15167	CB	CYS	D	202	56.006	50.398	108.708	1.00 83.22	C
ATOM	15170	SG	CYS	D	202	57.133	51.729	108.422	1.00 81.91	S
ATOM	15171	C	CYS	D	202	57.728	48.846	107.836	1.00 86.17	C
ATOM	15172	O	CYS	D	202	58.868	49.308	107.923	1.00 86.56	O
ATOM	15173	N	ASN	D	203	57.254	48.177	106.780	1.00 84.31	N
ATOM	15175	CA	ASN	D	203	58.079	47.615	105.732	1.00 84.05	C
ATOM	15177	CB	ASN	D	203	57.692	46.171	105.447	1.00 87.34	C
ATOM	15180	CG	ASN	D	203	57.400	45.402	106.715	1.00 93.02	C

ATOM 15181	OD1	ASN	D	203	58.163	45.443	107.705	1.00	94.19	O
ATOM 15182	ND2	ASN	D	203	56.273	44.708	106.709	1.00	95.69	N
ATOM 15185	C	ASN	D	203	57.828	48.450	104.543	1.00	78.21	C
ATOM 15186	O	ASN	D	203	56.798	48.349	103.918	1.00	77.07	O
ATOM 15187	N	VAL	D	204	58.774	49.310	104.262	1.00	75.80	N
ATOM 15189	CA	VAL	D	204	58.728	50.161	103.109	1.00	71.12	C
ATOM 15191	CB	VAL	D	204	59.273	51.551	103.467	1.00	69.36	C
ATOM 15193	CG1	VAL	D	204	58.892	52.562	102.404	1.00	64.60	C
ATOM 15197	CG2	VAL	D	204	58.753	51.967	104.837	1.00	69.88	C
ATOM 15201	C	VAL	D	204	59.544	49.533	101.980	1.00	71.71	C
ATOM 15202	O	VAL	D	204	60.760	49.405	102.076	1.00	73.45	O
ATOM 15203	N	ASN	D	205	58.867	49.133	100.912	1.00	70.66	N
ATOM 15205	CA	ASN	D	205	59.554	48.715	99.697	1.00	71.49	C
ATOM 15207	CB	ASN	D	205	59.047	47.351	99.229	1.00	74.94	C
ATOM 15210	CG	ASN	D	205	59.923	46.761	98.143	1.00	78.41	C
ATOM 15211	OD1	ASN	D	205	60.868	46.022	98.437	1.00	84.36	O
ATOM 15212	ND2	ASN	D	205	59.661	47.141	96.874	1.00	77.11	N
ATOM 15215	C	ASN	D	205	59.436	49.745	98.564	1.00	66.99	C
ATOM 15216	O	ASN	D	205	58.335	50.165	98.188	1.00	65.08	O
ATOM 15217	N	HIS	D	206	60.575	50.160	98.031	1.00	66.16	N
ATOM 15219	CA	HIS	D	206	60.573	51.013	96.867	1.00	63.53	C
ATOM 15221	CB	HIS	D	206	61.317	52.331	97.165	1.00	62.70	C
ATOM 15224	CG	HIS	D	206	61.168	53.375	96.096	1.00	59.74	C
ATOM 15225	ND1	HIS	D	206	62.041	53.481	95.038	1.00	60.76	N
ATOM 15227	CE1	HIS	D	206	61.660	54.482	94.258	1.00	60.76	C
ATOM 15229	NE2	HIS	D	206	60.570	55.028	94.772	1.00	56.00	N
ATOM 15231	CD2	HIS	D	206	60.261	54.371	95.937	1.00	57.75	C
ATOM 15233	C	HIS	D	206	61.213	50.257	95.718	1.00	65.17	C
ATOM 15234	O	HIS	D	206	62.419	50.373	95.513	1.00	66.55	O
ATOM 15235	N	LYS	D	207	60.399	49.504	94.963	1.00	65.74	N
ATOM 15237	CA	LYS	D	207	60.878	48.605	93.893	1.00	67.90	C
ATOM 15239	CB	LYS	D	207	59.738	47.730	93.323	1.00	69.51	C
ATOM 15246	C	LYS	D	207	61.623	49.304	92.746	1.00	65.87	C
ATOM 15247	O	LYS	D	207	62.591	48.740	92.218	1.00	69.15	O
ATOM 15248	N	PRO	D	208	61.243	50.518	92.351	1.00	61.80	N
ATOM 15249	CA	PRO	D	208	61.943	51.167	91.206	1.00	60.92	C
ATOM 15251	CB	PRO	D	208	61.030	52.336	90.824	1.00	56.74	C
ATOM 15254	CG	PRO	D	208	60.162	52.553	91.983	1.00	55.16	C
ATOM 15257	CD	PRO	D	208	60.202	51.389	92.929	1.00	58.46	C
ATOM 15260	C	PRO	D	208	63.412	51.630	91.492	1.00	61.31	C
ATOM 15261	O	PRO	D	208	64.183	51.824	90.547	1.00	61.70	O
ATOM 15262	N	SER	D	209	63.764	51.760	92.771	1.00	61.75	N
ATOM 15264	CA	SER	D	209	65.107	52.100	93.230	1.00	63.81	C
ATOM 15266	CB	SER	D	209	65.067	53.338	94.118	1.00	61.67	C
ATOM 15269	OG	SER	D	209	64.729	53.003	95.435	1.00	61.97	O
ATOM 15271	C	SER	D	209	65.706	51.015	94.078	1.00	68.74	C
ATOM 15272	O	SER	D	209	66.705	51.256	94.740	1.00	71.24	O
ATOM 15273	N	ASN	D	210	65.085	49.836	94.113	1.00	70.96	N
ATOM 15275	CA	ASN	D	210	65.640	48.698	94.851	1.00	75.73	C
ATOM 15277	CB	ASN	D	210	67.009	48.338	94.275	1.00	79.41	C
ATOM 15280	CG	ASN	D	210	67.493	47.009	94.735	1.00	85.45	C
ATOM 15281	OD1	ASN	D	210	66.693	46.147	95.042	1.00	86.85	O
ATOM 15282	ND2	ASN	D	210	68.826	46.840	94.825	1.00	91.76	N
ATOM 15285	C	ASN	D	210	65.746	48.906	96.367	1.00	76.54	C
ATOM 15286	O	ASN	D	210	66.441	48.163	97.027	1.00	81.20	O
ATOM 15287	N	THR	D	211	65.043	49.891	96.915	1.00	73.00	N
ATOM 15289	CA	THR	D	211	65.020	50.089	98.360	1.00	75.11	C
ATOM 15291	CB	THR	D	211	64.668	51.546	98.732	1.00	71.89	C
ATOM 15293	OG1	THR	D	211	64.896	52.438	97.628	1.00	70.10	O
ATOM 15295	CG2	THR	D	211	65.666	52.070	99.782	1.00	76.24	C
ATOM 15299	C	THR	D	211	64.044	49.148	99.040	1.00	76.40	C
ATOM 15300	O	THR	D	211	62.956	48.902	98.516	1.00	74.76	O
ATOM 15301	N	LYS	D	212	64.432	48.605	100.193	1.00	80.57	N
ATOM 15303	CA	LYS	D	212	63.545	47.720	100.946	1.00	82.72	C
ATOM 15305	CB	LYS	D	212	63.730	46.229	100.569	1.00	87.28	C
ATOM 15312	C	LYS	D	212	63.809	47.921	102.405	1.00	85.46	C
ATOM 15313	O	LYS	D	212	64.258	47.015	103.062	1.00	91.69	O
ATOM 15314	N	VAL	D	213	63.489	49.105	102.900	1.00	82.31	N

ATOM	15316	CA	VAL	D	213	63.725	49.519	104.291	1.00	85.17	C
ATOM	15318	CB	VAL	D	213	63.756	51.057	104.298	1.00	82.29	C
ATOM	15320	CG1	VAL	D	213	63.512	51.666	105.713	1.00	84.73	C
ATOM	15324	CG2	VAL	D	213	65.083	51.527	103.696	1.00	84.19	C
ATOM	15328	C	VAL	D	213	62.711	49.064	105.372	1.00	86.25	C
ATOM	15329	O	VAL	D	213	61.532	49.006	105.129	1.00	82.68	O
ATOM	15330	N	ASP	D	214	63.192	48.774	106.586	1.00	91.59	N
ATOM	15332	CA	ASP	D	214	62.311	48.532	107.749	1.00	92.98	C
ATOM	15334	CB	ASP	D	214	62.506	47.092	108.271	1.00	98.93	C
ATOM	15337	CG	ASP	D	214	62.194	46.035	107.204	1.00	97.80	C
ATOM	15338	OD1	ASP	D	214	61.385	46.349	106.310	1.00	92.43	O
ATOM	15339	OD2	ASP	D	214	62.686	44.884	107.157	1.00	100.35	O
ATOM	15340	C	ASP	D	214	62.580	49.592	108.846	1.00	94.11	C
ATOM	15341	O	ASP	D	214	63.738	50.011	109.018	1.00	97.04	O
ATOM	15342	N	LYS	D	215	61.519	50.079	109.507	1.00	91.96	N
ATOM	15344	CA	LYS	D	215	61.627	50.915	110.722	1.00	94.21	C
ATOM	15346	CB	LYS	D	215	61.440	52.411	110.394	1.00	88.82	C
ATOM	15353	C	LYS	D	215	60.643	50.460	111.849	1.00	96.87	C
ATOM	15354	O	LYS	D	215	59.545	50.002	111.586	1.00	94.60	O
ATOM	15355	N	ARG	D	216	61.060	50.595	113.105	1.00	102.63	N
ATOM	15357	CA	ARG	D	216	60.210	50.347	114.279	1.00	105.91	C
ATOM	15359	CB	ARG	D	216	61.002	49.578	115.347	1.00	114.01	C
ATOM	15368	C	ARG	D	216	59.655	51.654	114.900	1.00	104.92	C
ATOM	15369	O	ARG	D	216	60.344	52.686	114.955	1.00	104.73	O
ATOM	15370	N	VAL	D	217	58.416	51.599	115.392	1.00	104.77	N
ATOM	15372	CA	VAL	D	217	57.769	52.766	116.007	1.00	104.59	C
ATOM	15374	CB	VAL	D	217	56.461	53.206	115.224	1.00	98.42	C
ATOM	15376	CG1	VAL	D	217	55.939	54.582	115.703	1.00	97.76	C
ATOM	15380	CG2	VAL	D	217	56.697	53.270	113.726	1.00	92.68	C
ATOM	15384	C	VAL	D	217	57.468	52.519	117.502	1.00	111.16	C
ATOM	15385	O	VAL	D	217	56.318	52.305	117.890	1.00	111.38	O
ATOM	15386	N	GLU	D	218	58.506	52.549	118.337	1.00	117.44	N
ATOM	15388	CA	GLU	D	218	58.321	52.507	119.788	1.00	124.37	C
ATOM	15390	CB	GLU	D	218	59.670	52.285	120.523	1.00	132.09	C
ATOM	15393	CG	GLU	D	218	60.454	51.010	120.158	1.00	134.04	C
ATOM	15396	CD	GLU	D	218	61.880	51.285	119.658	1.00	134.59	C
ATOM	15397	OE1	GLU	D	218	62.817	51.026	120.429	1.00	140.64	O
ATOM	15398	OE2	GLU	D	218	62.079	51.756	118.499	1.00	128.11	O
ATOM	15399	C	GLU	D	218	57.741	53.874	120.171	1.00	123.49	C
ATOM	15400	O	GLU	D	218	57.926	54.837	119.434	1.00	119.12	O
ATOM	15401	N	PRO	D	219	57.050	53.982	121.306	1.00	128.14	N
ATOM	15402	CA	PRO	D	219	56.704	55.312	121.852	1.00	129.40	C
ATOM	15404	CB	PRO	D	219	55.714	54.997	122.995	1.00	133.43	C
ATOM	15407	CG	PRO	D	219	55.987	53.558	123.371	1.00	137.50	C
ATOM	15410	CD	PRO	D	219	56.555	52.876	122.145	1.00	132.81	C
ATOM	15413	C	PRO	D	219	57.965	56.083	122.345	1.00	134.98	C
ATOM	15414	O	PRO	D	219	59.093	55.751	121.941	1.00	136.16	O
ATOM	15415	N	LYS	D	220	57.773	57.114	123.171	1.00	138.92	N
ATOM	15417	CA	LYS	D	220	58.896	57.870	123.769	1.00	144.98	C
ATOM	15419	CB	LYS	D	220	59.535	58.834	122.740	1.00	140.79	C
ATOM	15426	C	LYS	D	220	58.390	58.627	125.010	1.00	151.08	C
ATOM	15427	O	LYS	D	220	57.270	59.161	124.935	1.00	147.70	O
ATOM	15428	OXT	LYS	D	220	59.055	58.684	126.069	1.00	159.07	O
ATOM	15429	C1	NAG	E	321	29.462	-7.124	22.592	1.00	106.85	C
ATOM	15432	C2	NAG	E	321	28.616	-8.080	23.433	1.00	108.34	C
ATOM	15434	N2	NAG	E	321	27.778	-7.288	24.383	1.00	103.56	N
ATOM	15436	C7	NAG	E	321	26.642	-6.621	24.066	1.00	100.08	C
ATOM	15437	O7	NAG	E	321	25.925	-6.934	23.152	1.00	101.12	O
ATOM	15438	C8	NAG	E	321	26.201	-5.421	24.839	1.00	96.46	C
ATOM	15442	C3	NAG	E	321	29.493	-9.202	24.102	1.00	112.92	C
ATOM	15444	O3	NAG	E	321	28.990	-10.588	23.960	1.00	118.55	O
ATOM	15446	C4	NAG	E	321	31.051	-9.069	23.931	1.00	113.06	C
ATOM	15448	O4	NAG	E	321	31.842	-9.641	24.956	1.00	113.90	O
ATOM	15450	C5	NAG	E	321	31.401	-7.591	23.904	1.00	108.70	C
ATOM	15452	C6	NAG	E	321	32.887	-7.238	24.154	1.00	106.46	C
ATOM	15455	O6	NAG	E	321	33.769	-8.115	23.495	1.00	106.75	O
ATOM	15457	O5	NAG	E	321	30.883	-7.285	22.627	1.00	108.92	O
ATOM	15458	C1	NAG	E	322	29.267	-9.662	26.756	1.00	110.31	C



ATOM 15461	C2	NAG E 322	28.521	-10.967	26.426	1.00114.38	C
ATOM 15463	N2	NAG E 322	28.052	-10.913	25.020	1.00116.92	N
ATOM 15465	C7	NAG E 322	28.385	-11.780	24.057	1.00119.42	C
ATOM 15466	O7	NAG E 322	29.320	-11.475	23.340	1.00121.28	O
ATOM 15467	C8	NAG E 322	27.607	-13.054	23.839	1.00120.01	C
ATOM 15471	C3	NAG E 322	27.408	-11.226	27.470	1.00113.49	C
ATOM 15473	O3	NAG E 322	26.898	-12.548	27.431	1.00115.37	O
ATOM 15475	C4	NAG E 322	27.936	-10.952	28.884	1.00112.48	C
ATOM 15477	O4	NAG E 322	26.846	-11.144	29.763	1.00111.54	O
ATOM 15479	C5	NAG E 322	28.645	-9.568	28.956	1.00109.09	C
ATOM 15481	C6	NAG E 322	29.263	-9.135	30.280	1.00107.46	C
ATOM 15484	O6	NAG E 322	28.277	-8.551	31.092	1.00105.99	O
ATOM 15486	O5	NAG E 322	29.744	-9.611	28.071	1.00109.51	O
ATOM 15487	C1	MAN E 323	27.558	-13.638	31.168	1.00118.90	C
ATOM 15490	C2	MAN E 323	26.564	-13.183	32.294	1.00117.77	C
ATOM 15492	O2	MAN E 323	26.868	-11.917	32.907	1.00116.43	O
ATOM 15494	C3	MAN E 323	25.081	-13.205	31.860	1.00117.73	C
ATOM 15496	O3	MAN E 323	24.400	-11.977	32.023	1.00112.67	O
ATOM 15498	C4	MAN E 323	24.976	-13.765	30.434	1.00119.97	C
ATOM 15500	O4	MAN E 323	23.637	-13.872	30.008	1.00121.73	O
ATOM 15502	C5	MAN E 323	25.750	-15.104	30.461	1.00122.58	C
ATOM 15504	C6	MAN E 323	25.209	-16.307	29.627	1.00125.63	C
ATOM 15507	O6	MAN E 323	24.816	-16.087	28.285	1.00125.42	O
ATOM 15509	O5	MAN E 323	27.124	-14.727	30.312	1.00121.55	O
ATOM 15510	C1	MAN E 324	25.902	-11.845	35.755	1.00115.15	C
ATOM 15513	C2	MAN E 324	27.196	-11.304	35.140	1.00112.82	C
ATOM 15515	O2	MAN E 324	26.996	-11.188	33.736	1.00113.36	O
ATOM 15517	C3	MAN E 324	27.691	-9.982	35.758	1.00109.46	C
ATOM 15519	O3	MAN E 324	28.466	-9.354	34.763	1.00107.10	O
ATOM 15521	C4	MAN E 324	26.596	-8.988	36.246	1.00108.78	C
ATOM 15523	O4	MAN E 324	27.023	-8.082	37.287	1.00103.92	O
ATOM 15525	C5	MAN E 324	25.275	-9.715	36.643	1.00112.59	C
ATOM 15527	C6	MAN E 324	24.102	-8.722	36.842	1.00110.06	C
ATOM 15530	O6	MAN E 324	23.750	-8.085	35.622	1.00108.11	O
ATOM 15532	O5	MAN E 324	24.926	-10.812	35.755	1.00114.60	O
ATOM 15533	C1	NAG E 881	51.524	67.218	74.770	1.00 82.89	C
ATOM 15536	C2	NAG E 881	50.338	68.025	74.160	1.00 83.13	C
ATOM 15538	N2	NAG E 881	49.032	67.353	73.995	1.00 82.71	N
ATOM 15540	C7	NAG E 881	47.991	67.386	74.866	1.00 82.73	C
ATOM 15541	O7	NAG E 881	47.380	66.346	75.237	1.00 78.34	O
ATOM 15542	C8	NAG E 881	47.603	68.758	75.385	1.00 84.08	C
ATOM 15546	C3	NAG E 881	50.819	68.571	72.803	1.00 83.44	C
ATOM 15548	O3	NAG E 881	49.657	69.047	72.125	1.00 81.68	O
ATOM 15550	C4	NAG E 881	52.075	69.513	72.964	1.00 84.89	C
ATOM 15552	O4	NAG E 881	52.660	69.876	71.736	1.00 84.61	O
ATOM 15554	C5	NAG E 881	53.218	68.848	73.783	1.00 83.76	C
ATOM 15556	C6	NAG E 881	54.566	69.652	74.031	1.00 85.43	C
ATOM 15559	O6	NAG E 881	54.704	71.055	74.263	1.00 83.52	O
ATOM 15561	O5	NAG E 881	52.665	68.147	74.940	1.00 86.69	O
ATOM 15562	C1	NAG E3281	49.375	31.629	48.905	1.00 52.84	C
ATOM 15565	C2	NAG E3281	49.482	31.018	50.297	1.00 51.74	C
ATOM 15567	N2	NAG E3281	50.091	31.941	51.249	1.00 51.34	N
ATOM 15569	C7	NAG E3281	49.384	32.526	52.211	1.00 50.13	C
ATOM 15570	O7	NAG E3281	48.435	32.032	52.749	1.00 53.22	O
ATOM 15571	C8	NAG E3281	49.756	33.856	52.704	1.00 50.66	C
ATOM 15575	C3	NAG E3281	50.226	29.684	50.255	1.00 52.62	C
ATOM 15577	O3	NAG E3281	50.116	29.054	51.488	1.00 52.27	O
ATOM 15579	C4	NAG E3281	49.732	28.723	49.174	1.00 54.50	C
ATOM 15581	O4	NAG E3281	50.703	27.716	48.931	1.00 54.62	O
ATOM 15582	C5	NAG E3281	49.375	29.441	47.856	1.00 54.70	C
ATOM 15584	C6	NAG E3281	48.447	28.552	47.010	1.00 55.71	C
ATOM 15587	O6	NAG E3281	47.278	28.100	47.717	1.00 53.23	O
ATOM 15589	O5	NAG E3281	48.735	30.686	48.078	1.00 51.91	O
ATOM 15590	C1	NAG E3282	50.357	26.487	49.573	1.00 54.61	C
ATOM 15592	C2	NAG E3282	51.035	25.314	48.888	1.00 56.44	C
ATOM 15594	N2	NAG E3282	50.443	25.157	47.600	1.00 56.42	N
ATOM 15596	C7	NAG E3282	50.897	25.560	46.412	1.00 57.36	C
ATOM 15597	O7	NAG E3282	51.890	26.176	46.141	1.00 58.44	O

ATOM 15598	C8	NAG	E3282	50.036	25.176	45.269	1.00	58.52	C
ATOM 15602	C3	NAG	E3282	50.703	24.044	49.639	1.00	56.65	C
ATOM 15604	O3	NAG	E3282	51.439	22.899	49.223	1.00	60.43	O
ATOM 15606	C4	NAG	E3282	51.144	24.227	51.060	1.00	59.24	C
ATOM 15608	O4	NAG	E3282	50.928	22.982	51.702	1.00	59.30	O
ATOM 15609	C5	NAG	E3282	50.469	25.441	51.718	1.00	57.25	C
ATOM 15611	C6	NAG	E3282	51.087	25.744	53.078	1.00	55.87	C
ATOM 15614	O6	NAG	E3282	52.436	26.070	52.833	1.00	56.35	O
ATOM 15616	O5	NAG	E3282	50.700	26.585	50.922	1.00	56.55	O
ATOM 15617	C1	MAN	E3283	52.049	22.569	52.475	1.00	60.80	C
ATOM 15619	C2	MAN	E3283	51.547	22.103	53.804	1.00	59.65	C
ATOM 15621	O2	MAN	E3283	50.445	21.312	53.451	1.00	58.83	O
ATOM 15623	C3	MAN	E3283	52.518	21.233	54.574	1.00	61.41	C
ATOM 15625	O3	MAN	E3283	51.787	20.219	55.195	1.00	63.34	O
ATOM 15626	C4	MAN	E3283	53.562	20.456	53.794	1.00	64.14	C
ATOM 15628	O4	MAN	E3283	54.592	20.336	54.757	1.00	65.32	O
ATOM 15630	C5	MAN	E3283	53.906	21.186	52.484	1.00	64.35	C
ATOM 15632	C6	MAN	E3283	54.827	20.559	51.427	1.00	66.91	C
ATOM 15635	O6	MAN	E3283	54.336	19.397	50.755	1.00	68.16	O
ATOM 15636	O5	MAN	E3283	52.651	21.452	51.873	1.00	66.18	O
ATOM 15637	C1	MAN	E3284	55.217	18.249	50.742	1.00	72.30	C
ATOM 15639	C2	MAN	E3284	55.266	17.684	52.167	1.00	74.79	C
ATOM 15641	O2	MAN	E3284	53.926	17.897	52.622	1.00	75.61	O
ATOM 15643	C3	MAN	E3284	55.505	16.199	52.355	1.00	77.19	C
ATOM 15645	O3	MAN	E3284	55.980	15.970	53.712	1.00	78.27	O
ATOM 15646	C4	MAN	E3284	54.050	15.999	51.891	1.00	74.76	C
ATOM 15648	O4	MAN	E3284	53.363	14.913	52.491	1.00	74.26	O
ATOM 15650	C5	MAN	E3284	54.093	16.166	50.311	1.00	75.13	C
ATOM 15652	C6	MAN	E3284	52.766	16.286	49.596	1.00	71.00	C
ATOM 15655	O6	MAN	E3284	51.789	16.197	50.591	1.00	67.75	O
ATOM 15656	O5	MAN	E3284	54.772	17.312	49.795	1.00	71.66	O
ATOM 15657	C1	MAN	E3287	56.557	14.726	54.281	1.00	82.57	C
ATOM 15659	C2	MAN	E3287	57.357	13.797	53.289	1.00	86.35	C
ATOM 15661	O2	MAN	E3287	58.723	13.344	53.449	1.00	90.50	O
ATOM 15662	C3	MAN	E3287	56.672	12.482	52.944	1.00	89.09	C
ATOM 15664	O3	MAN	E3287	57.659	11.558	52.507	1.00	90.57	O
ATOM 15666	C4	MAN	E3287	55.887	11.911	54.115	1.00	89.40	C
ATOM 15668	O4	MAN	E3287	55.294	10.689	53.706	1.00	92.89	O
ATOM 15670	C5	MAN	E3287	54.863	12.927	54.621	1.00	83.20	C
ATOM 15672	C6	MAN	E3287	54.074	12.364	55.791	1.00	82.64	C
ATOM 15675	O6	MAN	E3287	53.440	11.149	55.398	1.00	86.10	O
ATOM 15677	O5	MAN	E3287	55.586	14.035	55.127	1.00	82.62	O
ATOM 15678	C1	MAN	E3288	59.546	13.176	54.658	1.00	92.52	C
ATOM 15680	C2	MAN	E3288	59.349	14.272	55.676	1.00	89.65	C
ATOM 15682	O2	MAN	E3288	58.271	13.854	56.471	1.00	91.69	O
ATOM 15684	C3	MAN	E3288	60.452	14.356	56.660	1.00	90.23	C
ATOM 15686	O3	MAN	E3288	59.890	15.181	57.619	1.00	85.18	O
ATOM 15688	C4	MAN	E3288	60.741	13.016	57.331	1.00	94.39	C
ATOM 15690	O4	MAN	E3288	62.025	13.205	57.964	1.00	93.03	O
ATOM 15692	C5	MAN	E3288	60.590	11.833	56.315	1.00	97.46	C
ATOM 15694	C6	MAN	E3288	60.604	10.434	56.978	1.00	101.20	C
ATOM 15697	O6	MAN	E3288	59.305	9.870	57.154	1.00	102.55	O
ATOM 15699	O5	MAN	E3288	59.440	12.000	55.444	1.00	94.57	O
ATOM 15700	C1	MAN	E3285	52.312	20.696	57.165	1.00	71.22	C
ATOM 15702	C2	MAN	E3285	51.852	19.512	58.022	1.00	72.51	C
ATOM 15704	O2	MAN	E3285	52.078	19.647	59.410	1.00	75.71	O
ATOM 15705	C3	MAN	E3285	50.367	19.348	57.867	1.00	68.59	C
ATOM 15707	O3	MAN	E3285	50.001	18.467	58.884	1.00	72.03	O
ATOM 15709	C4	MAN	E3285	49.651	20.659	58.121	1.00	64.77	C
ATOM 15711	O4	MAN	E3285	48.263	20.485	57.943	1.00	65.10	O
ATOM 15713	C5	MAN	E3285	50.145	21.664	57.134	1.00	62.44	C
ATOM 15715	C6	MAN	E3285	49.441	22.972	57.332	1.00	57.64	C
ATOM 15718	O6	MAN	E3285	49.509	23.586	56.085	1.00	54.72	O
ATOM 15720	O5	MAN	E3285	51.537	21.875	57.328	1.00	68.41	O
ATOM 15721	C1	MAN	E3286	52.667	20.955	59.763	1.00	77.35	C
ATOM 15723	C2	MAN	E3286	52.629	21.164	61.302	1.00	76.62	C
ATOM 15725	O2	MAN	E3286	52.926	19.916	61.946	1.00	81.48	O
ATOM 15727	C3	MAN	E3286	53.567	22.287	61.783	1.00	73.66	C

ATOM 15729	O3	MAN	E3286	54.478	21.668	62.617	1.00	73.03	O
ATOM 15731	C4	MAN	E3286	54.473	23.006	60.754	1.00	75.14	C
ATOM 15733	O4	MAN	E3286	54.449	24.416	61.021	1.00	71.56	O
ATOM 15735	C5	MAN	E3286	54.173	22.670	59.260	1.00	76.43	C
ATOM 15737	C6	MAN	E3286	55.208	23.365	58.290	1.00	76.78	C
ATOM 15740	O6	MAN	E3286	55.328	23.003	56.888	1.00	76.61	O
ATOM 15742	O5	MAN	E3286	54.002	21.227	59.234	1.00	77.45	O
ATOM 15743	C1	MAN	E3289	50.258	15.461	49.783	1.00	75.63	C
ATOM 15745	C2	MAN	E3289	50.034	14.267	48.872	1.00	75.77	C
ATOM 15747	O2	MAN	E3289	48.660	14.201	48.764	1.00	72.18	O
ATOM 15749	C3	MAN	E3289	50.526	14.452	47.437	1.00	78.29	C
ATOM 15751	O3	MAN	E3289	49.933	13.510	46.572	1.00	79.15	O
ATOM 15753	C4	MAN	E3289	50.081	15.789	46.882	1.00	77.40	C
ATOM 15755	O4	MAN	E3289	50.521	15.836	45.541	1.00	77.75	O
ATOM 15757	C5	MAN	E3289	50.659	16.920	47.772	1.00	76.35	C
ATOM 15759	C6	MAN	E3289	50.230	18.330	47.313	1.00	71.38	C
ATOM 15762	O6	MAN	E3289	51.375	19.128	47.137	1.00	68.05	O
ATOM 15764	O5	MAN	E3289	50.198	16.752	49.136	1.00	76.70	O
ATOM 15765	C1	NAG	E3371	38.544	32.137	31.287	1.00	73.74	C
ATOM 15768	C2	NAG	E3371	39.910	31.524	30.912	1.00	72.50	C
ATOM 15770	N2	NAG	E3371	40.864	31.546	32.013	1.00	71.87	N
ATOM 15772	C7	NAG	E3371	41.239	30.472	32.757	1.00	70.84	C
ATOM 15773	O7	NAG	E3371	40.476	29.555	33.102	1.00	70.45	O
ATOM 15774	C8	NAG	E3371	42.672	30.426	33.238	1.00	70.39	C
ATOM 15778	C3	NAG	E3371	40.656	32.193	29.783	1.00	75.42	C
ATOM 15780	O3	NAG	E3371	41.791	31.359	29.440	1.00	77.30	O
ATOM 15782	C4	NAG	E3371	39.730	32.463	28.602	1.00	76.98	C
ATOM 15784	O4	NAG	E3371	40.419	33.182	27.568	1.00	80.73	O
ATOM 15785	C5	NAG	E3371	38.541	33.295	29.072	1.00	77.51	C
ATOM 15787	C6	NAG	E3371	37.559	33.426	27.908	1.00	79.31	C
ATOM 15790	O6	NAG	E3371	36.679	34.496	28.177	1.00	80.38	O
ATOM 15792	O5	NAG	E3371	37.813	32.803	30.226	1.00	77.42	O
ATOM 15793	C1	NAG	E3372	41.583	32.516	26.923	1.00	81.06	C
ATOM 15795	C2	NAG	E3372	42.328	33.443	25.948	1.00	82.94	C
ATOM 15797	N2	NAG	E3372	41.740	34.767	25.838	1.00	82.97	N
ATOM 15799	C7	NAG	E3372	42.233	35.902	26.335	1.00	82.90	C
ATOM 15800	O7	NAG	E3372	41.520	36.914	26.248	1.00	82.64	O
ATOM 15801	C8	NAG	E3372	43.607	35.961	26.991	1.00	82.07	C
ATOM 15805	C3	NAG	E3372	42.419	32.829	24.547	1.00	85.35	C
ATOM 15807	O3	NAG	E3372	43.207	33.591	23.635	1.00	87.85	O
ATOM 15809	C4	NAG	E3372	43.054	31.472	24.780	1.00	84.91	C
ATOM 15811	O4	NAG	E3372	43.723	30.920	23.637	1.00	91.00	O
ATOM 15812	C5	NAG	E3372	41.959	30.586	25.314	1.00	82.11	C
ATOM 15814	C6	NAG	E3372	42.432	29.260	25.924	1.00	80.32	C
ATOM 15817	O6	NAG	E3372	43.839	29.217	26.026	1.00	82.02	O
ATOM 15819	O5	NAG	E3372	41.168	31.317	26.251	1.00	83.28	O
ATOM 15820	C1	MAN	E3373	43.193	31.163	22.297	1.00	90.26	C
ATOM 15822	C2	MAN	E3373	43.289	29.790	21.572	1.00	89.29	C
ATOM 15824	O2	MAN	E3373	42.106	29.541	20.822	1.00	88.30	O
ATOM 15826	C3	MAN	E3373	44.594	29.551	20.798	1.00	90.57	C
ATOM 15828	O3	MAN	E3373	44.458	28.528	19.795	1.00	92.13	O
ATOM 15829	C4	MAN	E3373	45.145	30.855	20.206	1.00	93.50	C
ATOM 15831	O4	MAN	E3373	46.449	30.566	19.675	1.00	97.00	O
ATOM 15833	C5	MAN	E3373	45.156	32.027	21.232	1.00	91.21	C
ATOM 15835	C6	MAN	E3373	45.845	33.348	20.765	1.00	92.87	C
ATOM 15838	O6	MAN	E3373	45.180	34.027	19.709	1.00	91.50	O
ATOM 15840	O5	MAN	E3373	43.831	32.276	21.657	1.00	90.06	O
ATOM 15841	C1	MAN	E3374	45.299	27.327	19.975	1.00	91.45	C
ATOM 15843	C2	MAN	E3374	44.665	25.926	19.573	1.00	90.43	C
ATOM 15845	O2	MAN	E3374	43.307	25.675	19.923	1.00	85.56	O
ATOM 15847	C3	MAN	E3374	44.958	25.484	18.106	1.00	93.36	C
ATOM 15849	O3	MAN	E3374	43.909	25.879	17.264	1.00	92.46	O
ATOM 15851	C4	MAN	E3374	46.346	25.944	17.578	1.00	95.44	C
ATOM 15853	O4	MAN	E3374	47.038	24.929	16.892	1.00	96.98	O
ATOM 15855	C5	MAN	E3374	47.209	26.363	18.774	1.00	94.63	C
ATOM 15857	C6	MAN	E3374	48.726	26.471	18.535	1.00	95.51	C
ATOM 15860	O6	MAN	E3374	49.041	26.392	17.176	1.00	99.02	O
ATOM 15862	O5	MAN	E3374	46.576	27.526	19.340	1.00	94.07	O

ATOM	15863	C1	NAG	E3891	45.808	53.754	43.706	1.00	74.28	C
ATOM	15866	C2	NAG	E3891	45.380	54.293	42.335	1.00	76.79	C
ATOM	15868	N2	NAG	E3891	43.931	54.439	42.244	1.00	77.53	N
ATOM	15870	C7	NAG	E3891	43.082	53.652	41.542	1.00	79.46	C
ATOM	15871	O7	NAG	E3891	42.117	54.113	40.922	1.00	80.77	O
ATOM	15872	C8	NAG	E3891	43.269	52.147	41.487	1.00	77.83	C
ATOM	15876	C3	NAG	E3891	45.958	53.518	41.171	1.00	79.74	C
ATOM	15878	O3	NAG	E3891	45.933	54.287	39.941	1.00	85.15	O
ATOM	15880	C4	NAG	E3891	47.366	53.013	41.512	1.00	79.56	C
ATOM	15882	O4	NAG	E3891	47.766	52.108	40.515	1.00	81.56	O
ATOM	15884	C5	NAG	E3891	47.547	52.327	42.862	1.00	74.77	C
ATOM	15886	C6	NAG	E3891	49.038	51.935	43.162	1.00	76.89	C
ATOM	15889	O6	NAG	E3891	50.128	52.559	42.436	1.00	78.59	O
ATOM	15891	O5	NAG	E3891	47.051	53.133	43.897	1.00	71.16	O
ATOM	15892	C1	NAG	E3892	49.560	50.560	39.673	1.00	85.54	C
ATOM	15895	C2	NAG	E3892	51.079	50.372	39.365	1.00	87.01	C
ATOM	15897	N2	NAG	E3892	51.830	49.743	40.498	1.00	86.01	N
ATOM	15899	C7	NAG	E3892	53.058	50.168	41.010	1.00	88.55	C
ATOM	15900	O7	NAG	E3892	54.106	50.400	40.348	1.00	92.23	O
ATOM	15901	C8	NAG	E3892	53.194	50.394	42.509	1.00	85.72	C
ATOM	15905	C3	NAG	E3892	51.752	51.651	38.791	1.00	89.93	C
ATOM	15907	O3	NAG	E3892	53.012	51.322	38.204	1.00	93.75	O
ATOM	15909	C4	NAG	E3892	50.816	52.383	37.790	1.00	92.19	C
ATOM	15911	O4	NAG	E3892	51.469	53.394	36.980	1.00	97.04	O
ATOM	15913	C5	NAG	E3892	49.621	52.861	38.652	1.00	90.09	C
ATOM	15915	C6	NAG	E3892	48.688	53.957	38.073	1.00	91.72	C
ATOM	15918	O6	NAG	E3892	49.232	54.724	36.977	1.00	93.72	O
ATOM	15920	O5	NAG	E3892	48.877	51.689	39.028	1.00	88.11	O
ATOM	15921	C1	NAG	E4201	42.244	56.852	52.671	1.00	63.81	C
ATOM	15924	C2	NAG	E4201	43.345	57.207	51.711	1.00	65.17	C
ATOM	15926	N2	NAG	E4201	44.591	56.697	52.209	1.00	64.00	N
ATOM	15928	C7	NAG	E4201	45.518	56.163	51.423	1.00	64.41	C
ATOM	15929	O7	NAG	E4201	45.413	56.030	50.212	1.00	65.04	O
ATOM	15930	C8	NAG	E4201	46.795	55.727	52.065	1.00	64.60	C
ATOM	15934	C3	NAG	E4201	43.381	58.699	51.617	1.00	68.66	C
ATOM	15936	O3	NAG	E4201	44.262	58.910	50.571	1.00	74.46	O
ATOM	15938	C4	NAG	E4201	42.044	59.335	51.220	1.00	71.76	C
ATOM	15940	O4	NAG	E4201	41.985	60.760	51.475	1.00	76.53	O
ATOM	15941	C5	NAG	E4201	40.915	58.632	51.980	1.00	68.94	C
ATOM	15943	C6	NAG	E4201	39.614	58.830	51.256	1.00	70.71	C
ATOM	15946	O6	NAG	E4201	38.706	58.151	52.076	1.00	70.23	O
ATOM	15948	O5	NAG	E4201	41.037	57.234	52.120	1.00	65.06	O
ATOM	15949	C1	NAG	E4202	42.056	61.718	50.372	1.00	81.14	C
ATOM	15951	C2	NAG	E4202	41.295	63.019	50.736	1.00	83.23	C
ATOM	15953	N2	NAG	E4202	40.158	62.736	51.611	1.00	81.14	N
ATOM	15955	C7	NAG	E4202	40.195	62.977	52.938	1.00	81.55	C
ATOM	15956	O7	NAG	E4202	40.397	62.106	53.790	1.00	75.71	O
ATOM	15957	C8	NAG	E4202	39.997	64.413	53.403	1.00	84.96	C
ATOM	15961	C3	NAG	E4202	40.871	63.865	49.497	1.00	87.52	C
ATOM	15963	O3	NAG	E4202	40.860	65.241	49.801	1.00	91.09	O
ATOM	15965	C4	NAG	E4202	41.751	63.571	48.257	1.00	88.70	C
ATOM	15967	O4	NAG	E4202	41.562	64.296	46.993	1.00	92.75	O
ATOM	15968	C5	NAG	E4202	41.445	62.067	48.006	1.00	86.08	C
ATOM	15970	C6	NAG	E4202	42.113	61.443	46.760	1.00	86.81	C
ATOM	15973	O6	NAG	E4202	43.309	60.781	47.074	1.00	86.56	O
ATOM	15975	O5	NAG	E4202	41.555	61.202	49.146	1.00	82.49	O
ATOM	15976	C1	MAN	E4203	41.597	65.753	46.758	1.00	96.52	C
ATOM	15978	C2	MAN	E4203	42.878	66.374	46.086	1.00	98.52	C
ATOM	15980	O2	MAN	E4203	43.726	65.559	45.284	1.00	94.95	O
ATOM	15982	C3	MAN	E4203	42.475	67.691	45.329	1.00	104.12	C
ATOM	15984	O3	MAN	E4203	42.359	67.581	43.900	1.00	106.03	O
ATOM	15986	C4	MAN	E4203	41.185	68.311	45.942	1.00	105.60	C
ATOM	15988	O4	MAN	E4203	41.065	69.698	45.630	1.00	108.12	O
ATOM	15990	C5	MAN	E4203	41.097	68.015	47.482	1.00	102.96	C
ATOM	15992	C6	MAN	E4203	39.839	68.676	48.110	1.00	104.13	C
ATOM	15995	O6	MAN	E4203	39.443	67.969	49.283	1.00	100.82	O
ATOM	15997	O5	MAN	E4203	41.313	66.623	47.864	1.00	97.25	O
ATOM	15998	C1	NAG	E5041	12.333	62.275	39.325	1.00	137.11	C

ATOM 16001	C2	NAG E5041	12.986	63.604	39.616	1.00138.53	C
ATOM 16003	N2	NAG E5041	13.364	63.660	41.044	1.00136.10	N
ATOM 16005	C7	NAG E5041	14.433	63.080	41.645	1.00128.39	C
ATOM 16006	O7	NAG E5041	14.366	62.041	42.320	1.00122.17	O
ATOM 16007	C8	NAG E5041	15.723	63.845	41.521	1.00127.26	C
ATOM 16011	C3	NAG E5041	12.054	64.733	39.116	1.00144.44	C
ATOM 16013	O3	NAG E5041	12.354	64.855	37.737	1.00145.80	O
ATOM 16015	C4	NAG E5041	10.515	64.539	39.222	1.00148.10	C
ATOM 16017	O4	NAG E5041	9.929	65.156	40.370	1.00149.99	O
ATOM 16019	C5	NAG E5041	10.130	63.058	39.106	1.00144.50	C
ATOM 16021	C6	NAG E5041	8.913	62.764	38.230	1.00147.36	C
ATOM 16024	O6	NAG E5041	7.864	63.649	38.544	1.00153.22	O
ATOM 16026	O5	NAG E5041	11.210	62.427	38.472	1.00141.22	O
ATOM 16027	C1	NAG E5441	0.234	62.127	19.661	1.00208.01	C
ATOM 16030	C2	NAG E5441	-0.771	60.962	19.723	1.00206.40	C
ATOM 16032	N2	NAG E5441	-1.608	60.874	18.514	1.00211.28	N
ATOM 16034	C7	NAG E5441	-2.489	59.886	18.295	1.00210.66	C
ATOM 16035	O7	NAG E5441	-2.188	58.694	18.394	1.00203.38	O
ATOM 16036	C8	NAG E5441	-3.897	60.288	17.910	1.00217.87	C
ATOM 16040	C3	NAG E5441	-1.619	61.139	20.977	1.00207.06	C
ATOM 16042	O3	NAG E5441	-0.826	60.941	22.134	1.00198.40	O
ATOM 16044	C4	NAG E5441	-2.284	62.530	20.945	1.00213.89	C
ATOM 16046	O4	NAG E5441	-3.220	62.583	19.875	1.00218.05	O
ATOM 16048	C5	NAG E5441	-1.247	63.664	20.825	1.00214.53	C
ATOM 16050	C6	NAG E5441	-1.248	64.554	22.067	1.00214.73	C
ATOM 16053	O6	NAG E5441	-2.440	65.317	22.081	1.00221.76	O
ATOM 16055	O5	NAG E5441	0.074	63.184	20.624	1.00209.23	O
ATOM 16056	C1	NAG E5791	8.755	20.579	-4.659	1.00160.24	C
ATOM 16059	C2	NAG E5791	10.058	20.624	-5.492	1.00160.36	C
ATOM 16061	N2	NAG E5791	10.855	21.828	-5.207	1.00160.00	N
ATOM 16063	C7	NAG E5791	12.120	21.841	-4.740	1.00156.65	C
ATOM 16064	O7	NAG E5791	12.480	22.620	-3.870	1.00154.63	O
ATOM 16065	C8	NAG E5791	13.175	20.917	-5.291	1.00156.27	C
ATOM 16069	C3	NAG E5791	9.820	20.532	-7.008	1.00164.24	C
ATOM 16071	O3	NAG E5791	11.069	20.293	-7.622	1.00162.89	O
ATOM 16073	C4	NAG E5791	8.760	19.484	-7.413	1.00166.62	C
ATOM 16075	O4	NAG E5791	8.408	19.503	-8.803	1.00169.76	O
ATOM 16077	C5	NAG E5791	7.504	19.627	-6.540	1.00165.87	C
ATOM 16079	C6	NAG E5791	6.460	18.548	-6.894	1.00167.55	C
ATOM 16082	O6	NAG E5791	6.356	18.315	-8.298	1.00169.02	O
ATOM 16084	O5	NAG E5791	7.861	19.573	-5.156	1.00161.26	O

END

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What is claimed:

1. A crystal of a receptor-antibody complex comprising a receptor-antibody complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab, wherein the crystal has a resolution determined by X-ray crystallography of better than about 5.0 Angstroms.
2. The crystal of Claim 1, wherein the crystal has a resolution determined by X-ray crystallography of better than about 4.0 Angstroms.
3. The crystal of Claim 2, wherein the crystal has a resolution determined by X-ray crystallography of better than about 3.0 Angstroms.
4. The crystal of Claim 1, wherein the crystal belongs to space group  $P2_1$  and has unit cell dimensions  $a = 77.8 \text{ \AA}$ ,  $b = 70.9 \text{ \AA}$ ,  $c = 147.1 \text{ \AA}$ , and  $\beta = 102.5^\circ$ .
5. The crystal of Claim 1, having atomic coordinates provided in Table 2.
6. A method for preparing a crystal of a complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab comprising preparing a solution containing the extracellular domain of EGFR and cetuximab Fab fragment, and growing the crystal.
7. The method of Claim 6, wherein the pH of the solution is about 6.0 to about 8.0.
8. A method of identifying a mimetic of cetuximab comprising comparing a three-dimensional structure of the mimetic with a three-dimensional structure determined for the complex of Claim 1.
9. The method of Claim 8, wherein the three dimensional structure of the mimetic is compared with at least a subset of the coordinates provided in Table 2.
10. The method of Claim 8, wherein identifying a mimetic is carried out by comparing the three-dimensional structure of the mimetic against the coordinates of at least one EGFR amino acid bound by cetuximab Fab.
11. The method of Claim 9, wherein the EGFR amino acid is selected from the group consisting of Gln 384, Gln 408, Ser 418, Ser 440, Lys 465, Ser 468, and Asn 469.
12. The method of Claim 8, wherein the locations of atoms of the mimetic that contact EGFR correspond to atoms of cetuximab that contact EGFR.

13. The method of Claim 8, wherein identifying a mimetic comprises comparing a three dimensional structure of a mimetic with the atomic coordinates of a region of EGFR selected from the group consisting of about amino acid residue 350 to about amino acid residue 354, about amino acid residue 380 to about amino acid residue 385, about amino acid residue 405 to about amino acid residue 420, about amino acid residue 435 to about amino acid residue 475 and combinations thereof.
14. The method of Claim 8, wherein the mimetic is a small molecule.
15. The method of Claim 8, wherein the mimetic is a peptide.
16. The method of Claim [0014], wherein the peptide is an antibody or a fragment thereof.
17. The method of Claim 8, wherein the method is carried out with use of a computer.
18. The method of Claim 8, further comprising synthesizing the mimetic and assaying its binding or physiological activity.
19. The method of Claim [0017], wherein the mimetic binds to EGFR with similar affinity as cetuximab Fab.
20. The method of Claim [0017], wherein the mimetic inhibits dimerization of EGFR expressed by a cell.
21. The method of Claim [0017], wherein the mimetic inhibits tyrosine kinase activity of the receptor.
22. The method of Claim [0017], wherein the mimetic blocks binding of EGF to EGFR.
23. A method for identifying a mimetic of cetuximab, comprising:
  - (a) introducing *in silico* substitutions in at least a single CDR region of cetuximab to obtain a pool of variants; and
  - (b) using a computer and at least a subset of the EGFR coordinates provided in Table 2 to select a variant with improved EGFR binding characteristics.
24. The method of Claim 23, further comprising determining the biological activity of the mimetic.



25. The method of Claim 23, wherein at most a single substitution is made in each CDR.

26. The method of Claim 23, wherein substitutions are made solely in a CDR3 region.

27. A computer-assisted method for identifying a potential antagonist mimetic that binds the extracellular domain of EGFR comprising a processor, a data storage system, an input device, and an output device, comprising:

- (a) inputting into the programmed computer through said input device data comprising the three-dimensional coordinates of a subset of the atoms of EGFR as set out in Table 2;
- (a) providing a database of chemical and peptide structures stored in said computer data storage system;
- (b) selecting from said database, using computer methods, structures having a portion that is structurally similar to said criteria data set; and
- (b) outputting to said output device the selected chemical structures having a portion similar to said criteria data set.

28. A machine-readable medium having stored thereon a plurality of executable instructions to perform a method to identify a mimetic of cetuximab using a crystal of a receptor-antibody complex comprising a receptor-antibody complex of an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab, the method comprising:

comparing a three-dimensional structure of a mimetic with a three dimensional structure an epidermal growth factor receptor (EGFR) extracellular domain and cetuximab Fab having an X-ray crystallography resolution of better than about 5.0 Angstroms.

29. The machine-readable medium of Claim [0019], wherein the EGFR coordinates comprise at least a subset of the atomic coordinates of Table 2.

30. The machine-readable medium of Claim [0019], wherein the three-dimensional structure of the mimetic is compared with at least a subset of the atomic coordinates of Table 2.

31. The machine-readable medium of Claim [0019], wherein identifying a mimetic comprises comparing the three-dimensional structure of a mimetic with a three-dimensional structure of at least one EGFR amino acid bound by cetuximab Fab.

32. The machine-readable medium of Claim [0019], wherein identifying a mimetic comprises comparing a three dimensional structure of a mimetic with the atomic coordinates of a

region of EGFR selected from the group consisting of about amino acid residue 350 to about amino acid residue 354, about amino acid residue 380 to about amino acid residue 385, about amino acid residue 405 to about amino acid residue 420, about amino acid residue 435 to about amino acid residue 475 and combinations thereof.

33. A machine-readable medium having stored thereon a plurality of executable instructions to perform a method for identifying a mimetic of cetuximab, the method comprising:

- (a) introducing *in silico* substitutions in at least a single CDR region of cetuximab to obtain a pool of variants; and
- (b) using a computer and at least a subset of the EGFR coordinates provided in Table 2 to select a variant with improved EGFR binding characteristics.

34. A cetuximab mimetic identified by the method of any one of Claims 8 to 27.

35. A method of inhibiting EGFR comprising administering a mimetic of Claim [0022].

36. A method of inhibiting tumor growth in a mammal comprising administering a therapeutically effective amount of a cetuximab mimetic of Claim [0022].

37. The method of Claim 36, wherein the tumor expresses EGFR.

38. The method of Claim 36, wherein the tumor overexpresses EGFR.

39. The method of Claim 36, wherein the tumor is a primary tumor.

40. The method of Claim 36, wherein the tumor is a metastatic tumor.

41. The method of Claim 36, wherein the tumor is a refractory tumor.

42. The method of Claim 36, wherein the tumor is a vascularized tumor.

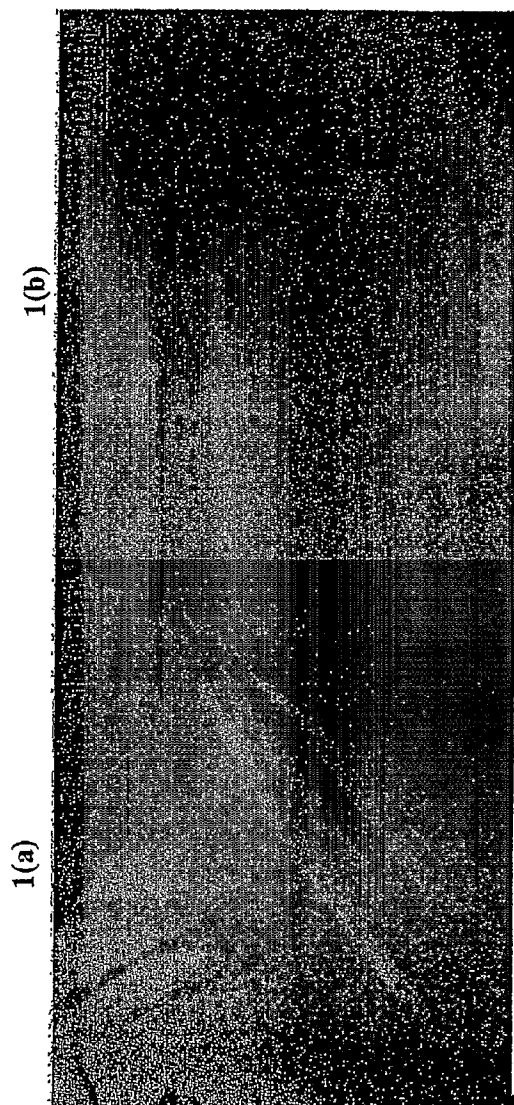
43. The method of Claim 36, wherein the tumor is selected from the group consisting of a colorectal tumor, a head and neck tumor, a pancreatic tumor, a lung tumor, a breast tumor, a renal cell carcinoma, and a glioblastoma.

44. The method of Claim 36, wherein the cetuximab mimetic is administered in combination with an anti-neoplastic agent.

45. The method of Claim 44, wherein the antineoplastic agent is a chemotherapeutic agent.

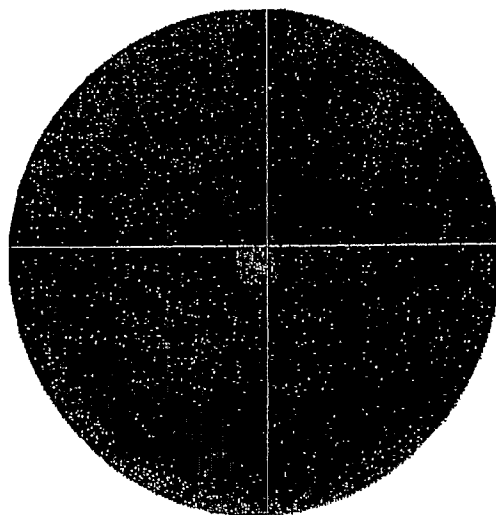
46. The method of Claim 44, wherein the antineoplastic agent is irinotecan (CPT-11).
47. The method of Claim 44, wherein the antineoplastic agent is radiation.
48. The method of Claim 36, wherein the cetuximab mimetic is administered in combination with an EGFR antagonist.
49. The method of Claim 48, wherein the EGFR antagonist is an intracellular EGFR antagonist.
50. The method of Claim 36, wherein the cetuximab mimetic is administered in combination with a VEGFR antagonist.
51. The method of Claim 36, wherein the cetuximab mimetic is administered in combination with an insulin like growth factor receptor (IGFR) antagonist.
52. A method of treating a hyperproliferative disease comprising administering a therapeutically effective amount of a cetuximab mimetic of Claim [0022].
53. The method of Claim 52, wherein the hyperproliferative disease is psoriasis.
54. The method of Claim 52, wherein the cetuximab mimetic is administered in combination with a topical or systemic agent for psoriasis.
55. The method of Claim 52, wherein the cetuximab mimetic is administered in combination with a corticosteroid.
56. The method of Claim 52, wherein the cetuximab mimetic is administered in combination with a retinoid.

**Figure 1- Cetuximab Fab:sEGFR crystals**



**Cetuximab Fab:sEGFR**

Crystallization condition 15% PEG 3350, 250 mM Ammonium Sulfate,  
100 mM Imidazole, pH 7.5.

**FIGURE 2- Cetuximab Fab:sEGFR complex**

Space group  $P2_1$   
 Cell dimensions  $a = 77.8 \text{ \AA}$   $b = 70.9 \text{ \AA}$   $c = 147.1 \text{ \AA}$   $\beta = 102.5$   
 One Fab:sEGFR complex in the a.u.  
 X-ray source CHESS A1  
 Resolution limit  $2.8 \text{ \AA}$

**Native Data Set From CHESS A1 to  $2.8 \text{ \AA}$  resolution**

Observed/unique 141,255/38,177  
 Completeness 99 % (90.6 %)  
 Rsym 0.03 (0.33)  
 $\langle I/\sigma \rangle$  16.8 (5.6)

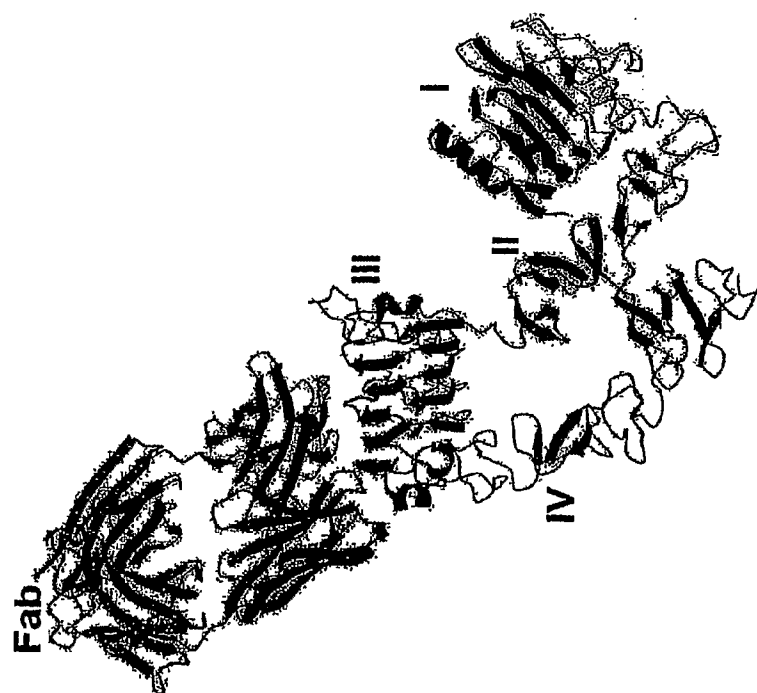
**Phasing**

Molecular Replacement using tethered sEGFR, and coordinates of Fab.

**Current Refinement (CNS)**

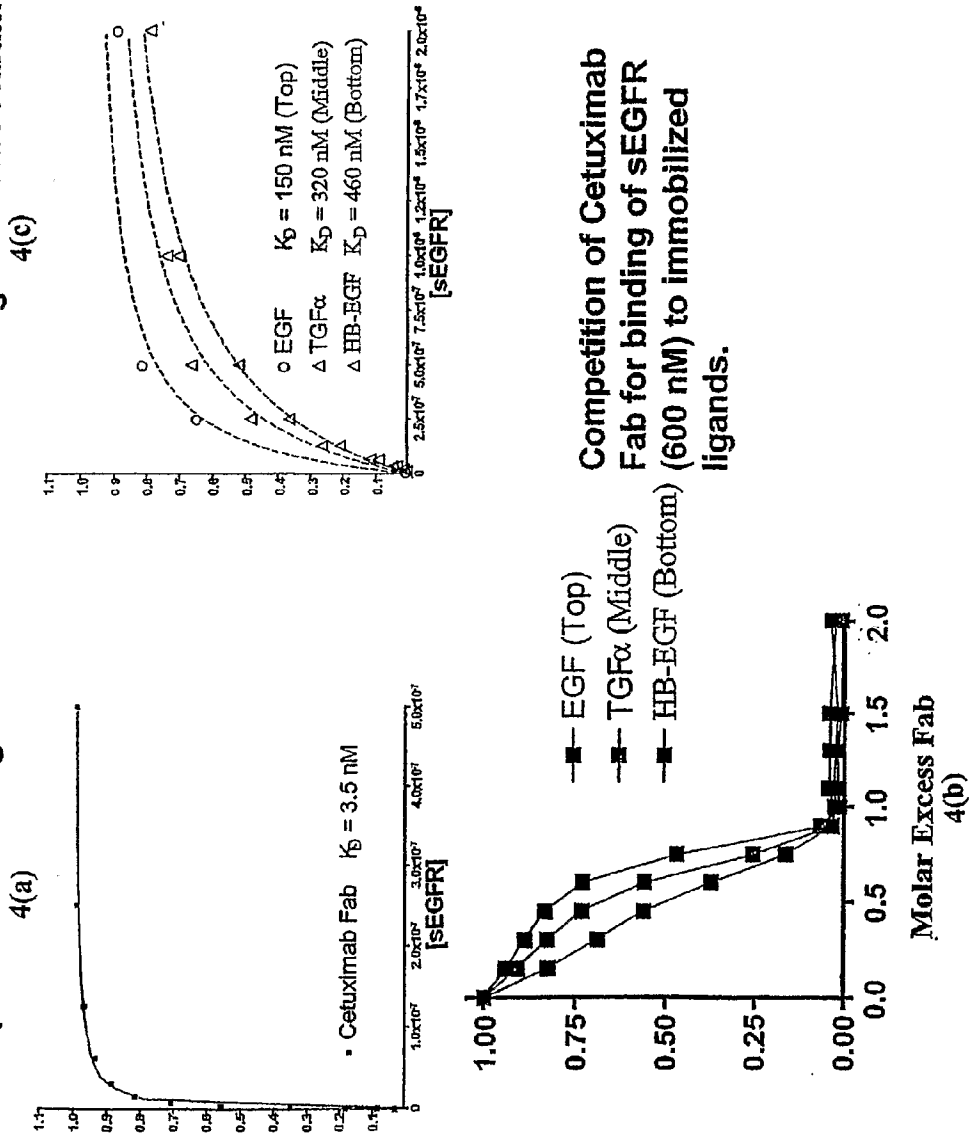
$R_{\text{factor}} = 22 \%$   $R_{\text{free}} = 27 \%$   
 Rmsd bonds lengths 0.028  $\text{\AA}$   
 Rmsd bond angles  $1.13^\circ$

**Figure 3- Cetuximab Fab:sEGFR complex**



**SUBSTITUTE SHEET (RULE 26)**

**Figure 4- Equilibrium binding of sEGFR to immobilized ligands and Cetuximab Fab**



Sequence listing.TXT  
SEQUENCE LISTING

<110> ImClone Systems Incorporated  
The University of Pennsylvania  
Kussie, Paul H.  
Ferguson, Kathryn M.

<120> Crystal Of EGFR Extracellular Domain And Cetuximab Fab Fragment,  
And Uses Thereof

<130> 11245/53776

<140> To Be Assigned  
<141> Herewith - 2005-06-14

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<151> 2004-06-14

<150> 60/634,363  
<151> 2004-12-08

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                    20                      25                      30

Ile His Trp Tyr Gln Gln Arg Thr Asn Gly Ser Pro Arg Leu Leu Ile  
                    35                      40                      45

Lys Tyr Ala Ser Glu Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser Gly  
                    50                      55                      60

Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu Ser  
65                      70                      75                      80

Glu Asp Ile Ala Asp Tyr Tyr Cys Gln Gln Asn Asn Asn Trp Pro Thr  
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Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys Arg Thr Val Ala Ala  
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## Sequence Listing.TXT

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 145 150 155 160  
 Gln Ser Val Thr Glu Gln Asp Ser Lys Asp Ser Thr Tyr Ser Leu Ser  
 165 170 175  
 Ser Thr Leu Thr Leu Ser Lys Ala Asp Tyr Glu Lys His Lys Val Tyr  
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 35 40 45  
 Gly Val Ile Trp Ser Gly Gly Asn Thr Asp Tyr Asn Thr Pro Phe Thr  
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 Ser Arg Leu Ser Ile Asn Lys Asp Asn Ser Lys Ser Gln Val Phe Phe  
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 Lys Met Asn Ser Leu Gln Ser Asn Asp Thr Ala Ile Tyr Tyr Cys Ala  
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 Arg Ala Leu Thr Tyr Tyr Asp Tyr Glu Phe Ala Tyr Trp Gly Gln Gly  
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## Sequence listing.TXT

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 145 150 155 160  
 Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe Pro Ala Val Leu  
 165 170 175  
 Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val Thr Val Pro Ser  
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 Asn Cys Glu Val Val Leu Gly Asn Leu Glu Ile Thr Tyr Val Gln Arg  
 35 40 45  
 Asn Tyr Asp Leu Ser Phe Leu Lys Thr Ile Gln Glu Val Ala Gly Tyr  
 50 55 60  
 Val Leu Ile Ala Leu Asn Thr Val Glu Arg Ile Pro Leu Glu Asn Leu  
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## Sequence listing.TXT

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 Ser Ser Asp Phe Leu Ser Asn Met Ser Met Asp Phe Gln Asn His Leu  
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 Gly Ser Cys Gln Lys Cys Asp Pro Ser Cys Pro Asn Gly Ser Cys Trp  
 165 170 175  
 Gly Ala Gly Glu Glu Asn Cys Gln Lys Leu Thr Lys Ile Ile Cys Ala  
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 Gln Gln Cys Ser Gly Arg Cys Arg Gly Lys Ser Pro Ser Asp Cys Cys  
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 His Asn Gln Cys Ala Ala Gly Cys Thr Gly Pro Arg Glu Ser Asp Cys  
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 Pro Glu Gly Lys Tyr Ser Phe Gly Ala Thr Cys Val Lys Lys Cys Pro  
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 Ala Glu Ser Tyr Glu Met Glu Glu Asp Gly Val Arg Lys Cys Ala Lys  
 290 295 300  
 Cys Glu Gly Pro Cys Arg Lys Val Cys Asn Gly Ile Gly Ile Gly Glu  
 305 310 315 320  
 Tyr Lys Asp Ser Leu Ser Ile Asn Ala Thr Asn Ile Lys His Phe Lys  
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 Asn Cys Thr Ser Ile Ser Gly Asp Leu His Ile Leu Pro Val Ala Phe  
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## Sequence listing.TXT

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 385 390 395 400  
 Ile Ile Arg Gly Arg Thr Lys Gln His Gly Asn Phe Ser Leu Ala Val  
 405 410 415  
 Val Ser Leu Asn Ile Thr Ser Leu Gly Leu Arg Ser Leu Lys Glu Ile  
 420 425 430  
 Ser Asp Gly Asp Val Ile Ile Ser Gly Asn Lys Asn Leu Cys Tyr Ala  
 435 440 445  
 Asn Thr Ile Asn Trp Ala Ala Leu Phe Gly Thr Ser Gly Gln Lys Thr  
 450 455 460  
 Lys Ile Ile Ser Asn Arg Gly Ala Asn Ala Cys Ala Ala Thr Gly Gln  
 465 470 475 480  
 Val Cys His Ala Leu Cys Ser Pro Glu Gly Cys Trp Gly Pro Glu Pro  
 485 490 495  
 Arg Asp Cys Val Ser Cys Ala Asn Val Ser Arg Gly Arg Glu Cys Val  
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 Asp Lys Cys Asn Leu Leu Glu Gly Glu Pro Arg Glu Phe Val Glu Asn  
 515 520 525  
 Ser Glu Cys Ile Gln Cys His Pro Glu Cys Leu Pro Gln Ala Met Asn  
 530 535 540  
 Ile Thr Cys Thr Gly Arg Gly Pro Asp Asn Cys Ile Gln Cys Ala His  
 545 550 555 560  
 Tyr Ile Asp Gly Pro His Cys Val Lys Thr Cys Pro Ala Gly Val Met  
 565 570 575  
 Gly Glu Asn Asn Thr Leu Val Trp Lys Tyr Ala Asp Ala Gly His Val  
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 595 600 605

Sequence listing.TXT

Leu Ala Gly Cys Pro Thr  
610